DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 18-131846-LO

Project Name/Address: Sadis Residence/9312 SE Shoreland Dr.

Planner: Reilly Pittman

Phone Number: 425-452-4350

Minimum Comment Period: March 14, 2019

Materials included in this Notice:

- ☒ Blue Bulletin
- ☒ Checklist
- ☒ Vicinity Map
- ☒ Plans
- ☐ Other:

OTHERS TO RECEIVE THIS DOCUMENT:

- ☐ State Department of Fish and Wildlife / Sterwart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
- ☒ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
- ☐ Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
- ☐ Attorney General ecyolyef@atg.wa.gov
- ☒ Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

SEPA Checklist reviewed by Reilly Pittman on 2/20/2019

NT SERVICES DEPARTMENT
:NUE NE
'A 98009-9012

SEPA Environmental Checklist

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit the Land Use Desk in the Permit Center between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4) or call or email the Land Use Division at 425-452-4188 or landusereview@bellevuewa.gov. Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

Purpose of checklist:
The City of Bellevue uses this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:
This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies and reports. Please make complete and accurate answers to these questions to the best of your ability in order to avoid delays.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

PLEASE REMEMBER TO SIGN THE CHECKLIST. Electronic signatures are also acceptable.

RP

A. Background [help]

1. Name of proposed project, if applicable: [help]
   Sadis Residence

2. Name of applicant: [help]
   Dave Buck, Chesmore/Buck architecture

3. Address and phone number of applicant and contact person: [help]
   425-679-0907

4. Date checklist prepared: [help]
   November 13, 2018

5. Agency requesting checklist: [help]
   City of Bellevue Land Use

6. Proposed timing or schedule (including phasing, if applicable): [help]
   Construction to begin summer of 2019

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]
   No future additions

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]
   All information required for a Critical Areas Land Use Permit

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [help]
   This checklist is part of the Critical Areas Land Use Permit application

10. List any government approvals or permits that will be needed for your proposal, if known. [help]
    Critical Areas Land Use Permit, Building Permit, Clearing and Grading Permit

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]
    Construct new single family residence with accessory dwelling unit and cabana on site of existing single family residence.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [help]

9312 SE Shoreland Drive, Bellevue, WA 98004, King Co. parcel # 776870-0120

B. Environmental Elements [help]

1. Earth [help]

a. General description of the site: [help] (select one): ☐Flat, ☐rolling, ☐hilly, ☒steep slopes, ☐mountainous, other: *Click here to enter text.*

b. What is the steepest slope on the site (approximate percent slope)? [help]
40%-50%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [help]
Site is predominately Advance Outwash, with silty fine sand.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]
No suface indications of unstable soil.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]
Excavation is required for the cabana and residence. Approximately 112 cubic yards at the cabana and 812 cubic yards for the residence. Approximately 30 yards of fill at the new 2-car garage. About 70 yards of excavation for the new and reworked driveway. Suitable site soils will be used in the fill areas.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]
Erosion can occur due to the steep slope nature of the site. Site work is planned for the dry months of the year, all best management practices will be followed to prevent erosion during construction.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]
45% of the site will be covered by impervious surface.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]
Most all storm water runoff will be collected in downspouts and catch basins and diverted to the existing tight line outflow to Lake Washington. Some surface water from site walkways and stairs cast on-grade will be diverted to adjacent landscape areas.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction,

operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [help]
Emissions to the air will only be those normal to house construction and residential occupation.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]
No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]
None.

3. Water [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]
The north boundary of the site is the shoreline of Lake Washington. The lake is presently diverted to the Montlake Cut, Lake Union, Salmon Bay and into Puget Sound.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [help]
The entire work of construction of the house will occur withing 200' of the shoreline.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [help]
No fill or dredging will occur.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]
Click here to enter text.
None appear to be proposed

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]
The proposal is not within the 100 year floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [help]
No waste materials will discharge to the surface waters. All surface waters from parking areas will be collected and treated prior to discharge.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general

description, purpose, and approximate quantities if known. [help]
No, water is provided by municipal City of Bellevue supply.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]
Sewer service is provided by the City of Bellevue

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [help]
Roof, deck and patio storm water - will be collected in drains and downspouts and diverted to the existing tightline outlet through the existing bulkhead.
Parking surface water runoff - will be collected in catch basins, treated for impurities and divereted to the existing tightline.
Surface walks and stairs - runoff will be allowed to flow to adjacent landscape areas for diffusion into groundwater.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]
No sources of waster material, other than automobiles, will be present on the site

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [help]
Yes. The existing runoff from the roof and pervious surfaces is allowed to drain onto the surface of the ground via splash blocks. Only the runoff from the driveway/parking area is collected in a small catch basin and is then diverted to the lake without treatment.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]
As stated in c.1 above.

4. Plants [help]

a. Check the types of vegetation found on the site: [help]
☒deciduous tree: alder, maple, aspen, other: *Click here to enter text.*
☒evergreen tree: fir, cedar, pine, other: *Click here to enter text.*
☒shrubs
☒grass
☐pasture
☐crop or grain
☐Orchards, vineyards or other permanent crops.
☐wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other: *Click here to enter text.*

☐water plants: water lily, eelgrass, milfoil, other: *Click here to enter text.*
☐other types of vegetation: *Click here to enter text.*

b. What kind and amount of vegetation will be removed or altered? [help]
A 34" and 24" cedar will be removed to reconfigure the driveway, along with some rhododendrons and ground cover.

c. List threatened and endangered species known to be on or near the site. [help]
No threatened or endangered species are known on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]
New landscaping will be native plants to mitigate impacts

e. List all noxious weeds and invasive species known to be on or near the site. [help]
Ivy.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. [help]

Examples include:

birds: ☒hawk, ☒heron, ☒eagle, ☒songbirds, other: *Click here to enter text.*
mammals: ☐deer, ☐bear, ☐elk, ☐beaver, other: *Click here to enter text.*
fish: ☒bass, ☒salmon, ☒trout, ☐herring, ☐shellfish, other: *Click here to enter text.*

b. List any threatened and endangered species known to be on or near the site. [help]
No threatened or endangered species are known on or near the site.
Chinook, steelhead, and bull trout are found in Lake Washington and federally listed as threatened species.

c. Is the site part of a migration route? If so, explain. [help]
Site is not part of a known migration route
Juvenile salmon migrate in Lake Washington

d. Proposed measures to preserve or enhance wildlife, if any: [help]
New plantings will be native species.

e. List any invasive animal species known to be on or near the site. [help]
none are known

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [help]
The residence will be connected to gas and electrical service as provided by PSE.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]
There will be no detrimental impact on solar energy to adjacent properties. Tree removal will actually enhance this opportunity.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [help]
The new residence will conform to the current Washington State Energy Code, the existing residence was built in 1949.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. [help]
No hazards that are not usual to a residence.

1) Describe any known or possible contamination at the site from present or past uses. [help]
No known hazards. The residence will be tested for asbestos and lead paint prior to demolition. Any contamination found will be removed following all applicable guidelines.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. [help]
No known hazardous conditions are existing.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. [help]
No toxic or hazardous chemicals that are not usual to construction and residential use will be used on-site.

4) Describe special emergency services that might be required. [help]
No special services unusual to construction or residential use will be required.

5) Proposed measures to reduce or control environmental health hazards, if any: [help]
All construction techniques will conform to accepted environmental practices.

b. Noise [help]

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]
There is an existing marina 700' to the north and a new public park directly to the north across the bay.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)?

Indi-cate what hours noise would come from the site. [help]
There will be the usual noise from excavation and export of material, and noise from normal construction activities. Work will be confined to the hours allowed by the City of Bellevue.

3) Proposed measures to reduce or control noise impacts, if any: [help]
All work will conform to hours allowed by the City of Bellevue.

BCC 9.18

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]
The current use of the site is single family residence as are all properties adjacent. To the north across the bay is a new public park and to the northeast a marina. The proposal will have no effect on the adjacent uses.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [help]
The site was not a farmland or forest land.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: [help]
There are no farms or forests near the site.

c. Describe any structures on the site. [help]
The existing structure is a single family residence with a daylight basement.

d. Will any structures be demolished? If so, what? [help]
The existing structure will be demolished.

e. What is the current zoning classification of the site? [help]
Current zoning is R-4

f. What is the current comprehensive plan designation of the site? [help]
SF-H

g. If applicable, what is the current shoreline master program designation of the site? [help]
Shoreline Residential

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]
Yes, slope areas exceeding 40%.

i. Approximately how many people would reside or work in the completed project? [help]

five

j. Approximately how many people would the completed project displace? [help]
none

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]
There is no decrease in the site density

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]
Proposed structure and use comply with city ordinances and comprehensive plan

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any: [help]
There are no agricultural or forest lands in the vicinity

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]
Two, one high-income one low-income

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]
One high-income unit will be removed.

c. Proposed measures to reduce or control housing impacts, if any: [help]
Proposal includes an accessorie dwelling unit to increase site density

Subject to requirements in LUC 20.20.120

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [help]
The tallest height is 35 feet above average existing grade. The exterior will be glass, stone and wood.

b. What views in the immediate vicinity would be altered or obstructed? [help]
The roof of the tallest portion of the proposed residence will be eleven feet below the right-of-way bordering the site to the south. Views across the subject property from the existing residence to the west may be obscured, this residence also dates from 1948 and will soon be demolished.

Based on public comment this adjacent residence is not to be demolished.

c. Proposed measures to reduce or control aesthetic impacts, if any: [help]
The proposed design is very site specific and takes advantage of it's setting and climate to the extent possible. Materials will be from local renewable sources.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]
No light or glare unusual to a residential use.

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]
Landscape lighting will be controlled and fixtures shielded to prevent glare. Light fixtures for exterior spaces like the decks, patio and caban will be shielded recessed fixtures to no glare is visible from adjacent properties.

c. What existing off-site sources of light or glare may affect your proposal? [help]
Lighting from the marina and unshielded lighting from the new public park directly to the north

d. Proposed measures to reduce or control light and glare impacts, if any: [help]
None beyond what is stated in b. above.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]
Public parks and a marina are close by.

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]
The proposal would not alter or effect any existing recreational uses.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]
No changes are proposed for the existing bulkhead, and covered moorage.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. [help]
The existing residence is 70 years old but architecturally and historically insignificant. We are not aware of any local structures being listed in any registrys.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]
There are no landmarks or evidence the site was ever occupied by indigineous peoples.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [help]

There is no evidence that the site was occupied historically. When the lake level was lowered 9' in 1916 any historical or cultural became mute.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. [help]
This proposal includes no plans for cultural preservation.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help]
The site is served directly by Shoreland Drive SE. Main street and 101st Ave SE connect Shoreland to downtown Bellevue.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [help]
The nearest public transit stop is at Bellevue Way, about ½ mile east of the site.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help]
The proposed project will have parking for 11 cars, the existing residence has space for four cars.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]
No changes are required or proposed for existing streets or transportation facilities.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [help]
The home owner may use their personal boat for transportation if desired but no public water, rail or air transportation will be used or involved.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]
There will be no vehicular trips generated that are not normal to a single family residence with an accessory dwelling unit.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [help]
Shoreland Drive SE provides access only to single family residences and is not used commercially.

h. Proposed measures to reduce or control transportation impacts, if any: [help]
No special measures are proposed.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]
No public services will be required that haven't been required since the original structure was built.

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]
The new residence will have fire sprinklers reducing the fire protection requirement. It will also have a monitored security system.

16. Utilities [help]

a. Circle utilities currently available at the site: [help]
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other
The site has electricity, water, refuse service, telephone, sanitary sewer and cable tv.

c. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [help]
The proposal will require an updated electrical service and natural gas service be provided by Puget Sound Energy. The sewer will be connected to the existing side sewer (City of Bellevue), a larger water meter will be required from the City of Bellevue for water service.

C. Signature [help]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Dave Buck

Name of signee: *Dave Buck*
Position and Agency/Organization: *Chesmore/Buck architecture*
Date Submitted: ~~November 13, 2018~~ 12/6/18

Critical Areas Report

Sadis Residence

City of Bellevue

December 4, 2018

Prepared for:

City of Bellevue
PO Box 90012
Bellevue, WA 98009 9012

Prepared on behalf of (applicant):

David Sadis
9906 SE 5th Place
Bellevue, WA 98004

The Watershed Company

Title-page image: View of front of subject property from the existing pier – looking south (August 1, 2018).

Report Disclaimer: The information contained in this report is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria outlined in the methods section. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, state and federal regulatory authorities. No other warranty, expressed or implied, is made.

THE WATERSHED COMPANY

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Kirkland, WA 98033

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watershedco.com

The Watershed Company Reference Number: 180701
The Watershed Company Contact: Kenny Booth

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1. Introduction

1.1 Background and Purpose

The purpose of this report is to document potential critical area and buffer/setback and shoreline setback impacts associated with the proposed residential redevelopment project located on the shore of Meydenbauer Bay in the City of Bellevue, Washington (Figure 1). The project area is comprised of a single lot which is currently developed with a single-family residence (built in 1949) with an attached garage and driveway situated amongst several areas of steep slope. The property includes a terraced yard with concrete pathways and a grassy shoreline area which includes a rock bulkhead and pier with covered moorage structure. Portions of proposed improvements will occur within or adjacent to regulated steep slopes as well as within proximity to the shoreline.

The applicant proposes to redevelop the existing residence, driveway and garage, and construct a detached cabana near the shoreline. The proposed residence and associated hardscapes would be located within portions of on-site steep slope areas and the overlapping standard top-of-slope buffers and toe-of-slope setbacks. Some improvements will also occur within the standard shoreline structure setback and shoreline vegetation conservation area.

Bellevue Land Use Code (LUC) 20.25H.230 requires compliance with specific critical areas report criteria as part of any modification to a critical area or critical area buffer/setback, including a demonstration of how the development leads to equivalent or better protection of critical area functions and values. This report fulfills these criteria. Further, pursuant to LUC 20.25H.250(C)(1), this report has been prepared in conjunction with a geotechnical analysis report by PanGEO, Inc. For technical details related to geologic hazard areas, reference the project geotechnical report and/or any subsequent documentation addressing geotech-specific City comments. In addition, this report includes a demonstration of compliance with the City's shoreline regulations (LUC 20.25E), including an assessment of impacts within the shoreline structure setback and shoreline vegetation conservation area. This report presents a detailed discussion of the habitat and vegetation on-site and how the proposed development can be achieved with no net loss of critical area functions and values.

1.2 Methods

One ecologist and one landscape designer/arborist visited the site on August 1, 2018, to evaluate existing site conditions. Vegetative structure and composition, special habitat features, presence

of wildlife species and sign, and human disturbance were assessed, which inform the discussion of habitat presented in this report. Observations of established trees and dominant plant species on-site were utilized in preparation of the associated Mitigation Plan (Appendix A). Follow-up arborist assessment work was conducted on November 2, 2018. The results of this work can be found in the Tree Inventory Report – Sadis Residence, dated December 4, 2018.

2. Subject Property

2.1 Location and Description

The subject project is located at 9312 SE Shoreland Drive (parcel 7768700120) in the City of Bellevue. Lake Washington borders the project area to the north, and single-family residences are located to the south, east and west. The subject property is approximately 0.5 acres and is narrower then deep, extending over 300 feet landward from the lake. The parcel width tapers slightly away from the shoreline with approximately 70 feet of shoreline frontage and 60 feet of frontage along SE Shoreland Drive. There is an approximate 90-foot elevation change from the road to the lake. The property includes an existing single-family residence, situated near the middle of the site, approximately 90 feet from the shoreline. An attached garage extends south of the residence. A long, winding driveway provides access from SE Shoreland Drive to the residence/garage. The largest forested area on-site parallels the driveway, while areas north of the residence are predominately vegetated with ornamental and non-native vegetation, including extensive areas of lawn adjacent to the shoreline. Existing on-site vegetation is discussed in detail in Section 3 of this report.

The site is situated in the City-defined Beaux Arts sub-basin of the Cedar-Sammamish Watershed (WRIA 8). According to the Natural Resources Conservation Service Web Soil Survey, the site is characterized by Kitsap silt loam soils. Any surface or groundwater on the site would be expected to flow north toward the lake. No wetlands or streams were identified on-site during field investigations.

Figure 1. Vicinity and street level map (King County iMap).

3. Critical Areas

3.1 Geologic Hazard Areas

The subject property contains areas of steep slopes that meet the City's definition for critical area as a type of geologic hazard area. Areas of regulated steep slope have been determined by the project surveyor. Two isolated areas of steep slopes are located at the extreme southern end of the parcel, adjacent to SE Shoreland Drive. Two additional isolated areas are located to the west and east of the residence, with the largest slope area extending north of the residence toward the shoreline. Vegetation located in and adjacent to these critical areas provides a number of functions, discussed below.

3.1.1 Habitat Functions

Vegetation, whether located within or outside of critical areas, inherently provides some habitat functions. Habitat functions of the subject property have been assessed and are discussed in this section, consistent with the requirements of City of Bellevue's Land Use Code.

3.1.1.1 On-site Habitat

The most forested area of the site occurs at the southern portion of the property, adjacent to the existing driveway. A total of four significant trees are found in this area- a Japanese maple, two Western red cedars and a Kousa dogwood. Non-significant trees in this area include a Western hemlock, cherry and Oriental spruce. The understory is sparsely vegetated, with Oregon grape, snowberry, English laurel, and swordfern present in areas. The middle of the site includes the existing single-family residence and attached garage with a combination of ornamental, native, and non-native species present. Species include mountain ash, Japanese knotweed, English ivy, salal, swordfern, and vine maple. The shoreline area, north of the existing home, includes concrete steps, large areas of lawn, and a brick fireplace with a surrounding impervious patio/sitting area. Species near the shoreline and north of the home include salal, bleeding heart, holly, cherry, azalea, heather, hazelnut, Japanese knotweed, and English ivy. The shoreline is hardened with a rock bulkhead along the entire frontage of the property. Substrate in front of the bulkhead includes silty sand and small cobbles. An approximate 850 square foot dock, with two separate fingers, extends approximately 70 feet from shore. A wood moorage cover is located over the center of the dock, covering the inner three-quarters of area between the fingers.

Significant Trees. As described in the separately prepared Tree Inventory Report, the site includes a total of eight significant trees.

Figure 2. Forested area with sparse understory at southern end of parcel (8.1.18)

Figure 3. Driveway, near the middle of the parcel facing south (8.1.18)

Figure 4. Typical condition of steep slope adjacent to existing residence (8.1.18)

Figure 5. Near eastern property line, facing west below the residence (8.1.18)

Figure 6. Ivy and knotweed on slope below house (8.1.18)

Figure 7. Existing dock (8.1.18)

Figure 8. Slope between shoreline and house (8.1.18)

Figure 9. Existing shoreline condition (8.1.18)

3.1.1.2 Off-site Habitat

The opportunity for the subject property to provide habitat is dependent upon the potential for the greater vicinity to act as a source for wildlife. Therefore, the presence or absence of habitat patches in the landscape surrounding the subject property is considered in this assessment.

The general habitat type used to categorize the study area vicinity is Urban and Mixed Environs in the Medium-density Zone (Johnson and O'Neil 2001). This habitat type contains light industry mixed with dense residential development and some natural open spaces.

The area surrounding the subject property is urban and dominated by developed single-family residential land uses. Habitat areas within approximately 1/4 mile of the project site include Lake Washington and less intensely developed residential lots, primarily to the southwest. Some of these lots are larger and/or include more retained significant trees, resulting in areas of interconnecting canopy cover. However, these habitat patches in the vicinity are mostly disconnected from on-site habitat by roads and development.

3.1.1.3 Wildlife

Wildlife species expected to utilize the project site most are species that are adapted to living in urban settings, and that are not closely associated with wetland or stream environments. These species generally include raccoons, opossums, Eastern gray squirrel, rats, mice, bats, and a number of birds like crows, starlings, robins, chickadees, and sparrows, to name a few.

During site investigations, no species of local importance were observed on the subject property, nor was habitat was observed that is expected to have a primary association with any species of local importance given the local- and landscape-level conditions (see section 3.2).

3.2 Species of Local Importance

The City of Bellevue designates habitat associated with species of local importance as a critical area [LUC 20.25H.150(B)]. As noted in 3.1.1.3, wildlife use on site is expected to be limited to mainly urban species. However, it is possible that some habitat on site could occasionally be used by species of local importance, especially given the proximity to Lake Washington. Species of local importance [LUC 20.25H.150(A)] for which suitable habitat exists on the study property are bald eagle, pileated woodpecker, Vaux's swift, merlin, purple martin, great blue heron, osprey, red-tailed hawk, and common loon. Potential fish use of Lake Washington includes Chinook and coho salmon, bull trout, and river lamprey. The likelihood of each of these species utilizing the property is discussed below.

Bald eagles are common foragers over Lake Washington, and active nests are known in the lake area. Eagles often perch in tall lakeside trees for foraging and resting. Eagle nests are most

commonly built near broken tops of tall trees, and in western Washington, nests in forks of large deciduous trees are also common. A few potential nesting trees are located on the subject property, but nearby areas provide more suitable nesting habitat, with greater tree density and less human disturbance. No eagles or nests were observed on site during the site visit. Bald eagles were removed from the State's endangered species list in 2017 and WDFW no longer maps known bald eagle nests nor requires coordination on bald eagle plans for specific properties.

Pileated woodpeckers commonly use large conifers for drumming and foraging. The species is often spotted in suburban areas in King County. Individuals may occasionally use the large trees on the property, although the species' preferred large snags are not present. Suitable nesting sites for this species do not exist on the property.

Vaux's swifts forage in open skies over forests, lakes, and rivers, where insects are abundant. Lake Washington provides suitable foraging habitat, and the species may be present at times over the study area. Nesting normally takes place in old-growth forest where large, hollow snags are available. The study parcel does not provide nesting habitat for this species.

Merlins occur throughout western Washington in winter and during migration. Breeding birds are rare in the state. Occurrences are spotty but not uncommon in suburban areas, and the study parcel may provide a small amount of suitable hunting or perching area in the non-breeding season.

Purple martin is Washington State's least common swallow. The species forages over open water and could potentially use the lake area adjacent to the study property for foraging. There are no suitable standing snags available on the subject property for cavity-nesting.

Great blue herons are widespread in western Washington. Outside of breeding, which occurs in tall trees, commonly away from human disturbance, the birds are most often observed in and along rivers, lakes, and wetlands. The adjacent waters of Lake Washington are likely used by foraging and resting herons throughout the year.

Osprey are very common over Lake Washington. Osprey typically nest in trees adjacent and above water. One significant tree is adjacent to the shoreline and could be used for perching.

Red-tailed hawks nest in large trees, and although no active nests are present, the on-site trees may be suitable for the species. However, nests are generally located in more extensive woodlands than the site offers. Red-tailed hawks are ubiquitous in this area and are likely to occasionally perch on or fly over the property.

Common loons prefer large, secluded lakes in the eastern part of the state for breeding. In winter, the species is most common on the coast and in saltwater bays and inlets, but can be seen on freshwater lakes near the coast as well. The open waters of Lake Washington are commonly used by wintering loons, but the species is unlikely to enter the study parcel.

Chinook and coho salmon migrate through Lake Washington. The lake itself does not provide spawning habitat. The lake is used by juveniles for migration, as well as rearing. Lake temperatures are warmer than preferred by these species, particularly in shallow areas, and outside of the existing pier, the shoreline area provides no cover for hiding or cooling. The lake area immediately adjacent to the property is unlikely to be used extensively by these species.

Bull trout are rare or non-existent in Lake Washington. The species has a narrow temperature tolerance range, and is very unlikely to occur near the shallow waters adjacent to the study area.

River lamprey have been identified in Lake Washington. According to the U.S. Fish and Wildlife Service, the species has declined, present status is unknown, and little is known about their biology.

3.2.1 Water Quality, Hydrology, and Slope Stability Functions

In addition to habitat functions, vegetation also provides important water quality and hydrology functions. The ability of the site to perform these functions well is dependent upon the vegetation present (e.g., forested versus mowed lawn). Most non-developed portions of the site are vegetated and contain a mix of forested, scrub-shrub, and groundcover plants, both native and non-native. Areas closer to the shoreline include significant expanses of lawn. Vegetated (non-lawn) areas of the site are expected to intercept, allow for infiltration, and uptake rain and surface water, thereby functioning well to both filter water and reduce the quantity of water flowing down-gradient.

Furthermore, when located on slopes, vegetation can function to prevent soil erosion and improve slope stability. During heavy rain events, live vegetation and dead plant parts (e.g., dead stems, branches, leaves, etc.) prevent concentrated and potentially erosive flows from developing on steep slopes through rainwater interception. Vegetation growing on slopes also has the opportunity to provide slope stability through establishment of deep, inter-woven plant roots. Most native trees, shrubs, and groundcover plants perform this function well, while shallow-rooted weeds like Himalayan blackberry and English ivy, do not.

4. Local Regulations

4.1 Steep Slopes

In Bellevue, steep slope critical areas are regulated in Part 20.25H (Critical Areas Overlay District) of the LUC. According to LUC 20.25H.120(A)(2), slopes of 40 percent or more that have a rise of at least 10 feet and exceed 1,000 square feet in area are designated as geologic hazard areas and therefore subject to the regulations of LUC 20.25H.120 through 20.25H.145. According to LUC 20.25H.120(B)(1)(b), steep slope critical areas require a top-of-slope buffer of 50 feet. Further, pursuant to LUC 20.25H.120(C)(2), steep slopes require a toe-of-slope setback of 75 feet. The vast majority of the subject property is encumbered by steep slopes and/or buffers and setbacks. However, the footprint of the existing primary structure is excluded from being within critical areas, buffers, or setbacks (LUC 20.25H.035.B). Impacts within critical areas, buffer, and/or setbacks are also subject to the mitigation sequencing criteria of LUC 20.25H.215.

4.1.1 Critical Area Functions Based on Application of Code Standards

If the regulations and standards of the LUC were applied to this site, the existing single-family residence would remain and existing vegetated areas would continue to be available for wildlife use. The forested area would likely remain void of significant understory and non-native and invasive species present elsewhere would presumably remain and may proliferate, potentially degrading habitat over time. These species would be expected to have detrimental effects on the native vegetation present by out-competing native plants for light, nutrients, and/or water resources. Overall, critical area functions and values would be expected to decrease with time if the property was maintained in its current state.

4.1.2 Modification

Steep slope, steep slope buffer, and steep slope setbacks can only be modified through an approved critical areas report. The applicant must demonstrate that the modifications to the critical area, buffer, and setback, combined with any restoration efforts, will result in equivalent or better protection of critical area functions and values than would result from adhering to the standard application of the regulations (LUC 20.25H.230). Restoration activities would require monitoring and maintenance in accordance with LUC 20.25H.220, consistent with an approved restoration plan.

4.2 Habitat Associated with Species of Local Importance

As noted above, habitat associated with species of local importance are also regulated as a critical area according to LUC 20.25H.150(B). In this context, “habitat” is defined as “the place,

including physical and biotic conditions, where a plant or animal usually occurs and is fundamentally linked to the distribution and abundance of species."

As described in Section 3.2, there is no on-site evidence of the presence of habitat associated with species of local importance, other than Lake Washington itself, which has known Chinook and coho salmon use, and which may be used for foraging and resting for bird species. Some of the trees on site could also occasionally support migrating or foraging bird species. However, the habitat on site, including the lake area immediately adjacent to the property, is unlikely to be used extensively by any of these species. Furthermore, Washington Department of Fish and Wildlife (WDFW) Priority Habitat Species (PHS) data does not show the presence of any priority species within the vicinity. Therefore, it is The Watershed Company's opinion that the site is unencumbered by critical area habitat that has a primary association with species of local importance.

4.3 Shorelines

Work within 200 feet of the ordinary high water mark (OHWM) of Lake Washington is subject to the standards and provisions of LUC 20.25E. The subject parcel is located within the Shoreline Residential environment designation and includes a standard 50-foot shoreline structure setback, measured from the OHWM. Additionally, the site includes a 50-foot shoreline vegetation conservation area (SVCA), also measured from the OHWM. Any significant trees removed within 50 feet of the OHWM requires replacement pursuant to LUC 20.25E.065.F.8.c.iii.

4.3.1 Modification

The shoreline structure setback can be reduced to a minimum of 25 feet, subject to the provisions of LUC 20.25E.065.F. Impacts within the SVCA must be calculated and offset pursuant to the debit/credit system outlined in LUC 20.25E.065.F8. Reduction of the shoreline structure setback and/or impacts within the SVCA do not require preparation of a critical areas report or shoreline special report; however, compliance with the specific shoreline provisions will be discussed in this report.

5. Project

5.1 Description

The proposed project involves redevelopment of the residential parcel by removing the existing outdated single-family structure with attached garage and constructing a modern single-family

residence with a shoreline cabana. The new residence will include a total of four levels with the main entry on the second floor. Garage space is to be provided on both the second and third levels. The home will be situated to step down with the slope, limiting the overall height of any portion of the structure. The existing driveway extending from SE Shoreland Drive will be reconfigured to provide improved access to the garage entry points, with an area of outdoor guest parking provided, as well, as street parking is not available. The proposed cabana will be situated north of the new residence, just inside the standard shoreline structure setback. The closest point of the cabana will extend to within approximately 35 feet of the OHWM.

Unavoidable impacts to steep slope critical areas and associated buffers/setbacks will occur through site development. In addition, the cabana will encroach within both the standard shoreline structure setback and SVCA. To compensate for these impacts, on-site mitigation is proposed.

5.2 Mitigation Sequencing

Pursuant to LUC 20.25H.215, attempts to avoid and minimize impacts to the on-site steep slopes, buffers, and setbacks, as well as the shoreline structure setback and SVCA have been taken.

Avoidance. As previously mentioned, the vast majority of the site is encumbered by critical areas, buffers, or setbacks. Unencumbered portions of the site include the footprint of the existing primary structure and a small area just east of the existing driveway. Therefore, in order to redevelop the site with a new modern residence that is consistent with the scale and character of existing homes in the vicinity, full avoidance of impacts is not possible.

Minimization. Minimization techniques were utilized during the design process in order to limit impacts. Design of the proposed residence utilizes the full extent of the existing residential footprint, while the reconfigured driveway and guest parking area utilize existing paved surfaces. The cabana is to be constructed in an area partially comprised of existing impervious surfaces and lawn/non-native vegetation. Native plants have been incorporated into the site's landscape plan. Furthermore, standard best management practices, including temporary erosion and sediment control measures, will be implemented during construction.

Mitigation. As mitigation for unavoidable, permanent steep slope and buffer/setback impacts, 3,257 SF of the site will be enhanced through invasive weed removal and native plant installation (see details in next section and Appendix A). Additional mitigation is also proposed to fully compensate for shoreline setback/SVCA impacts associated with the cabana (see details in section 5.4.2 and Appendix A).

5.3 Impacts

5.3.1 Critical Area Impact Assessment

Project impacts to critical areas, buffers, and setbacks are summarized in Table 1, below, and discussed in detail in the following sub-sections. Impacts associated with the shoreline structure setback and SVCA are described in detail in Section 5.3.2.

Table 1. Project impact summary (quantities in square feet).

Critical Area Types and Locations	Existing Impacts	Proposed Impacts
ON-SITE		
Steep Slope Critical Area	302	1,698
50-ft Top of Slope Buffer & 75-ft Toe of Slope Setback Areas	3,726	6,475
TOTAL:	4,028	8,173

5.3.1.1 Direct Impacts

Direct, permanent impacts resulting from the proposal on steep slope areas total 1,698 SF. Permanent impacts, totaling 6,475 SF, are also proposed to steep slope buffer/setback areas. Together, these impacts total 8,173 SF. This compares to impacts associated with existing site conditions of 4,028 SF. Therefore, the proposed project will result in a net increase of 4,145 SF of steep slope and buffer/setback impact. A total of four significant trees will be removed as part of proposed activities.

These impacts have the potential to reduce the critical area functions discussed in Section 3.1 (habitat, water quality, hydrology, and slope stability). No significant adverse impacts to water quality and hydrology are anticipated from the proposal since the project must adhere to the City's regulations related to stormwater. Furthermore, the project has been developed in coordination with a geotechnical expert to ensure slope stability is maintained or improved.

5.3.1.2 Indirect Impacts

Disturbances associated with the proposed redevelopment of the property, like increased light and noise, are types of indirect effects on wildlife and habitat on-site. Introduction of domestic pets and fertilizer/herbicide use in landscape areas are also potential sources of indirect effects to wildlife/habitat from the proposed use. However, indirect impacts are not likely to significantly increase since the parcel is currently developed and redevelopment is not expected to substantially change the use patterns of the site. The new residence will be slightly larger than the existing residence and impervious/hardscape surfaces will increase. However, modern

techniques and other low-impact development measures will be implemented where feasible. This includes the use of pervious pavement, limitations to native vegetation only, and a decrease in lawn area (and corresponding potential for fertilizer/herbicide use). Replacement of significant trees with smaller mitigation trees will result in a temporal loss as new trees mature. Attempts to offset the temporal loss include maximizing the on-site mitigation area to be restored, along with extensive enhancement of the understory.

5.3.1.3 Cumulative Impacts

Impacts that result from collective changes over the landscape have the potential to affect habitat over time. The area within the vicinity of the project site is almost entirely developed with single-family residences. While some development or re-development can be expected, the overall character of the urban setting in not likely to change substantially. Residential neighborhoods, and other urban areas, do trend toward less mature native vegetation and more ornamental vegetation and impervious surface. The proposed project is consistent with this trend in that some vegetated areas will be replaced with development and increased impervious surface. However, the functions of retained habitat will be improved, not further degraded, once proposed mitigation activities are considered. Retained habitat is not likely to be developed further because of the presence of regulatory critical areas (steep slopes).

In the event that nearby, undeveloped land is developed in a manner similar to what is proposed for this project, anticipated changes to habitat in the landscape may include a reduction in habitat quantity, increased habitat fragmentation and disturbance, and improved quality of retained habitat areas. Overall, the cumulative impacts to urban habitat from relatively small development proposals like this one are expected to be minor. This is primarily due to the fact that the majority of the surrounding area has already been developed and is unlikely to substantially change in the foreseeable future. Additionally, similar proposals may require restoration of degraded habitat areas (as does this one), in which case, wildlife habitat would benefit.

5.3.2 Shoreline Impact Assessment

Proposed improvements will occur within the standard 50-foot shoreline structure setback, as well as the 50-foot SVCA. Specifically, the proposed cabana is to be situated approximately 35 feet from the OHWM. Exterior hardscape surfaces will occur adjacent to the cabana, also within both the structure setback and SVCA. Impacts are to be calculated pursuant to LUC 20.25E.065.F.8.c.i. Table 2 below summarizes proposed impact calculations.

Table 2. Shoreline Debit Calculations

Existing Land Cover of Areas to be Impacted	Area (SF)	Existing Value	Final Value	Change in Land Cover Value	Total Debit
0-25 ft from OHWM					
Lawn	42	0.1	0.0	0.1	4.2
				SUBTOTAL:	4.2
25-50 ft from OHWM					
Impervious surface	237	0.0	0.0	0.0	0
Lawn or invasive species	318	0.1	0.0	0.1	31.8
Native vegetation	688	0.6	0.0	0.6	412.8
				SUBTOTAL:	444.6
				GRAND TOTAL:	448.8

As seen in Table 2 above, a total of 448.8 shoreline debits will result from proposed activities. This includes the proposal cabana and associated hardscape surfaces within the standard shoreline structure setback and SVCA. Impacts will occur over areas of existing impervious surface, lawn, and native/non-native vegetation.

5.4 Mitigation

5.4.1 Critical Area Mitigation

The proposed mitigation plan (Appendix A) seeks to enhance a total of 3,257 SF of the site through invasive species removal and the planting of native trees, shrubs, and groundcover plants within the steep slope critical areas, steep slope buffers, and steep slope setbacks. These restoration actions will serve as mitigation for the 4,145 SF of new structural/impervious coverage within the steep slope and buffer/setback areas (Table 1).

5.4.2 Shoreline Mitigation

As mitigation for shoreline impacts summarized in Table 3, a total of 449 shoreline credits are proposed. Shoreline credits will include the planting of native vegetation adjacent to the shoreline (0-10 feet from the OHWM) as well as slightly further landward (0-25 and 25-50 feet from the OHWM). Plantings will include native trees, shrubs, and groundcover. Shoreline credits are summarized in Table 3 below.

Table 3. Shoreline Credit Calculations

Proposed Land Cover Types	Area (SF)	Existing Value	Final Value	Change in Land Cover Value	Total Credit
Native vegetation, 25-50 from OHWM (from lawn)	93	0.1	0.6	0.5	46.5
Native vegetation, 25-50 feet from OHWM (from impervious)	35	0.0	0.6	0.6	21
Native vegetation, 10-25 from OHWM (from lawn)	428	0.1	0.8	0.7	299.6
Native overhanging vegetation, 0-10 feet from OHWM (from lawn,)	91	0.1	1.0	0.9	81.9
SUBTOTAL:	647			TOTAL:	449
Native overhanging vegetation, 0-10 feet from the OWHM (pursuant to LUC 20.25E.065.F.8.c.iv)	75	---	---	---	---
GRAND TOTAL:	722				

Proposed shoreline credits, totaling 449, account for necessary planting to offset proposed impacts of 448.8 debits, pursuant to LUC 20.25E.065.F.8.c. Corresponding planting area equates to 647 square feet, 91 square feet of which will occur within 0-10 feet of the OHWM. The remainder will occur within 50 feet of the OHWM. An additional 75 square feet of plantings will also occur within 0-10 feet of the OHWM, pursuant to LUC 20.25E.065.F.8.c.iv. Proposed plantings will comply with the standards of LUC 20.25E.065.F.8.g, and will result in no net loss of shoreline ecological functions.

5.5 Critical Area Functional Lift Analysis

The proposed project, with incorporation of mitigation activities, will improve the functions of on-site critical areas. A qualitative analysis of the change in critical area functions is provided below. This analysis pertains to critical area/buffer/setback impacts only; shoreline specific mitigation compliance is discussed in the preceding section.

5.5.1 Water Quality, Hydrology, and Slope Stability

Existing Conditions. Existing steep slope and buffer/setback areas are primarily vegetated, with a combination of native trees and native and invasive plants (namely Himalayan blackberry, English ivy, bindweed, cherry laurel, and English holly). Some understory areas are primarily void of vegetation, particularly at the southern end of the parcel. Functions currently provided by vegetation on-site include rain and surface water interception and transpiration.

Vegetation also improves soil quality, which generally improves water infiltration into the soil. Vegetation on slopes aids in slope stability. However, shallow rooted, invasive plants (i.e., English ivy and Himalayan blackberry) provide limited slope stabilization functions. English ivy impairs slope stability functions by destabilizing trees growing on slopes.

Proposed Conditions. Redevelop the site with a modern residence in accord with geotechnical recommendations and stormwater regulations. Significantly reduce noted invasive plants site-wide. Replace invasive plants with native trees, shrubs, and groundcovers. Enhance underplanted understory areas.

Net Result. Slope stability is improved and water quality and hydrology functions are maintained, resulting in an overall net benefit to these functions on-site. New native plantings will have deeper root systems than the current areas of English ivy, reducing erosion potential and increasing slope stability.

5.5.2 Habitat

Existing Conditions. Existing steep slope and buffer/setback areas are developed with impervious surfaces and vegetated with native and non-native trees and areas of invasive plants. The existing vegetation assemblage, although disconnected from larger areas of vegetation, provides some habitat value to urban wildlife.

Proposed Conditions. Redevelop the site with a modern residence in accord with geotechnical recommendations and stormwater regulations. Four significant trees are to be removed. Significantly reduce noted invasive plants site-wide. Replace invasive plants with native trees, shrubs, and groundcovers. Enhance underplanted understory areas.

Net Result. Decreased quantity of vegetated areas available to provide wildlife habitat. Increase the habitat functions of retained vegetated areas, thereby improving habitat quality. Alteration of foraging, perching, and nesting opportunities for wildlife through tree removal and native plant installation. New native trees, shrubs and groundcover will be installed. Overall, the quality of habitat will be increased by replacing invasive plants and enhancing understory areas with a dense and diverse native plant assemblage appropriate to the eco-region and growing conditions on-site. New plantings will provide food, cover, and nesting opportunities for wildlife.

6. Critical Areas Report Criteria

As previously mentioned, steep slope critical areas, steep slope buffers, and steep slope setbacks, may be modified pursuant to LUC 20.25H.230. The Director may approve modifications if it can be shown that, through restoration, the modification will result in equivalent or better protection of critical area functions and values. The existing project site contains areas of low-functioning steep slopes and buffers/setbacks.

Per the LUC, the critical areas report must meet specific decision criteria in order for the Director to approve a proposal to modify the regulated steep slope, critical area buffer, and steep slope setback. Compliance with the relevant critical areas report criteria is addressed below.

LUC 20.25H.250(B) – Minimum Report Requirements

1. *Identification and classification of all critical areas and critical area buffers on the site;*
2. *Identification and characterization of all critical areas and critical area buffers on those properties immediately adjacent to the site;*

Critical areas and buffers located on or adjacent to the subject property are described in Sections 3 and 4, respectively.

3. *Identification of each regulation or standard of this code proposed to be modified;*

The subject site contains four separate areas of steep slope, as defined by LUC 20.25H.120(A)(2). Pursuant to LUC 20.25H.120(B)(1)(b) and 20.25H.120(C)(2)(b), a 50-foot top-of-slope buffer and 75-foot toe-of-slope setback are required. The applicant proposes to construct a new residence and detached cabana within portions of the steep slope critical area and associated buffer/setback areas. Reconfigured paved areas and hardscapes will also occur within these areas.

3. *A habitat assessment consistent with the requirements of LUC 20.25H.165;*

Habitat is assessed in Section 3.1.1. Referenced requirements are addressed below under the Habitat Assessment subsection.

4. *An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development;*

Cumulative impacts are discussed in Section 5.3.3.

5. *An analysis of the level of protection of critical area functions and values provided by the regulations or standards of this code, compared with the level of protection provided by the proposal. The analysis shall include:*

a. *A discussion of the functions and values currently provided by the critical area and critical area buffer on the site and their relative importance to the ecosystem in which they exist;*
b. *A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through application of the regulations and standards of this Code over the anticipated life of the proposed development; and*
c. *A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through the modifications and performance standards included in the proposal over the anticipated life of the proposed development;*

Discussion of current critical area functions is provided in Section 3. Critical area functions and values expected through application of standard regulations is provided in Section 4.1.1. The anticipated improvement of functions is provided in the functional lift evaluation in Section 5.7.

6. *A discussion of the performance standards applicable to the critical area and proposed activity pursuant to LUC 20.25H.160, and recommendation for additional or modified performance standards, if any;*

No species of local importance have been determined to have a primary association with the habitat available on the property, therefore additional performance standards (WDFW recommendations) do not apply. No additional or modified performance standards are proposed.

7. *A discussion of the mitigation requirements applicable to the proposal pursuant to LUC 20.25H.210, and a recommendation for additional or modified mitigation, if any; and*

A mitigation plan has been developed to meet the requirements of the LUC. No additional or modified mitigation is proposed.

8. *Any additional information required for the specific critical area as specified in the sections of this part addressing that critical area.*

None at this time.

LUC 20.25H.165(A) – Habitat Assessment

1. *Detailed description of vegetation and habitat on and adjacent to the site;*

See Section 3.1.1.

2. *Identification of any species of local importance that have a primary association with habitat on or adjacent to the site and assessment of potential project impacts to the use of the site by the species;*

No species of local importance have a primary association with on-site habitat. See Sections 3.1.1 and 3.2.

3. *A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the site;*

Since no species have a primary association, special management recommendations do not apply. Snag creation has been incorporated into the mitigation plan, which is in line with WDFW management recommendations for species that may use the site for foraging or perching on occasion.

4. *A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;*

See Section 5.3.

5. *A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed use or activity and to be conducted in accordance with the mitigation sequence set forth in LUC 20.25H.215; and*

Mitigation sequencing is demonstrated in Section 5.2.

6. *A discussion of ongoing management practices that will protect habitat after the site has been developed, including proposed monitoring and maintenance programs.*

A mitigation plan has been developed, described in Section 5.4, and included as Appendix A, which includes five years of mitigation site monitoring and maintenance.

LUC 20.25H.255 – Critical areas report – Decision criteria

To allow a steep slope critical area, buffer, or setback modification through an approved critical areas report, the Director must also find compliance with the decision criteria established in LUC 20.25H.255(A) and (B). Compliance with the relevant sections listed in LUC 20.25H.255(A) and (B) is addressed below.

A. General.

1. *The modifications and performance standards included in the proposal lead to levels of protection of critical area functions and values at least as protective as application of the regulations and standards of this code.*

See functional lift analysis in Section 5.5.

2. *Adequate resources to ensure completion of any required mitigation and monitoring efforts.*

The mitigation plan specifies appropriate species for planting and planting techniques, describes proper maintenance activities, and sets forth performance standards to be met yearly during monitoring to ensure that restoration plantings will be maintained, monitored, and successfully established within the first five years following implementation. Furthermore, to ensure that the proposed plantings are installed and that the five-year maintenance and monitoring plan is implemented, the applicant will post an Installation Assurance Device and a Maintenance Assurance Device prior to building permit issuance.

3. *The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site.*

Proposed mitigation will improve the functions of on-site steep slopes and buffers/setbacks. Mitigation activities will have positive effects on nearby off-site areas as well by replacing invasive species with native trees, shrubs, and groundcover, which will improve habitat and slope stability functions.

4. *The resulting development is compatible with other uses and development in the same land use district.*

The proposed structure is compatible with adjacent properties and surrounding development within the same land use district. Adjacent properties include residential land uses.

B. Decision Criteria – Proposals to Reduce Regulation Critical Area Buffer

1. *The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions.*

A mitigation plan is included as Appendix A and a functional lift analysis is provided in Section 5.4.

2. *The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist.*

See functional lift analysis in Section 5.5.

3. *The proposal includes a net gain in stormwater water quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer.*

See functional lift analysis in Section 5.5.

4. *Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;*

The mitigation plan specifies appropriate species for planting and planting techniques, describes proper maintenance activities, and sets forth performance standards to be met yearly during monitoring to ensure that restoration plantings will be maintained, monitored, and successfully established within the first five years following implementation. Furthermore, to ensure that the proposed plantings are installed and that the five-year maintenance and monitoring plan is implemented, the applicant will post an Installation Assurance Device and a Maintenance Assurance Device prior to building permit issuance.

5. *The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and*

Proposed mitigation will improve the functions of on-site steep slopes and buffers/setbacks. Mitigation activities will have positive effects on nearby off-site areas as well by replacing invasive species with native trees, shrubs, and groundcover, which will improve habitat and slope stability functions.

6. *The resulting development is compatible with other uses and development in the same land use district. (Ord. 5680, 6-26-06, § 3)*

The proposed residence is compatible with adjacent properties and surrounding development within the same land use district. Adjacent properties include similarly sized single-family residences.

Additional LUC 20.25H Criteria

Additional decision criteria related to geologic hazard areas is concurrently being addressed by PanGEO, Inc. in their geotechnical report, including the following sections:

- LUC 20.30P.140 – Critical areas report – Additional provisions for landslide hazards and steep slopes
- LUC 20.25H.125 – Performance standards – Landslide hazards and steep slopes
- LUC 20.25H.145 – Critical areas report – Approval of modification

7. Summary

Redevelopment is proposed on a property almost entirely encumbered by steep slope critical areas and associated buffers and setbacks as well as a shoreline structure setback and SVCA. The existing residence on the parcel will be removed and replaced with a modern residence and detached cabana. The driveway and other paved areas on-site will be configured. Proposed activities will result in new permanent impacts to critical areas, buffers, setbacks, as well as the shoreline structure setback and SVCA.

Impacts to the shoreline structure setback and SVCA will be fully compensated for through the installation of native plantings adjacent to the shoreline. This approach is consistent with the criteria of the City's shoreline master program and will result in no net loss of shoreline ecological functions.

As mitigation for proposed impacts to steep slope areas and corresponding buffers and setbacks, a significant portion of the site will be enhanced with native vegetation. This approach follows the City's critical areas report process, as described within this document. The proposed planting plan results in better protection of critical area functions and values than would be provided by the standard application of the geologic hazard area regulations. No loss of ecological function is expected as a result of proposed actions. Overall a net gain in steep slope critical area and steep slope buffer/setback functions and values is proposed both on- and off-site.

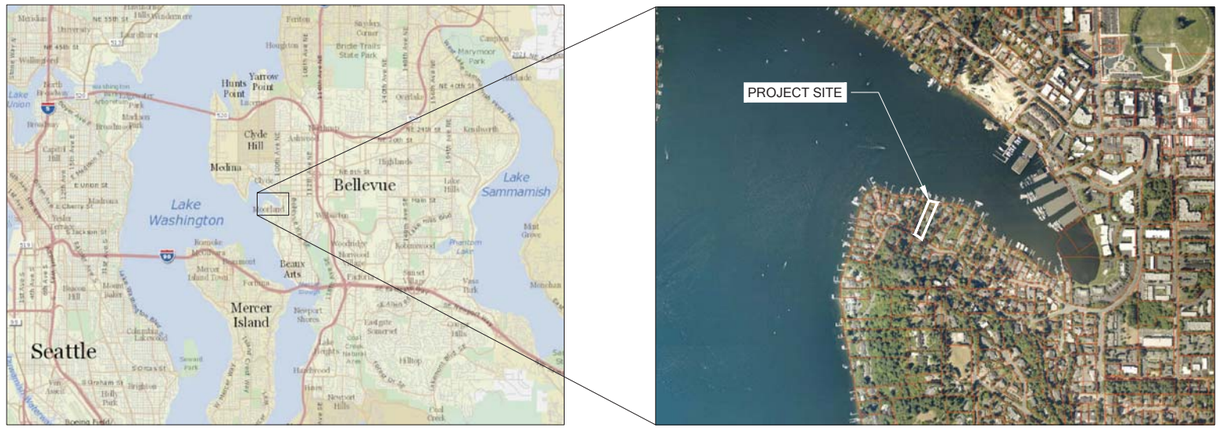
References

Johnson, D.H. and T.A. O'Neil. 2001. Wildlife-Habitat Relations in Oregon and Washington. Oregon State University Press. Corvallis, OR.

Appendix A

Mitigation Plan

SADIS MITIGATION PLAN

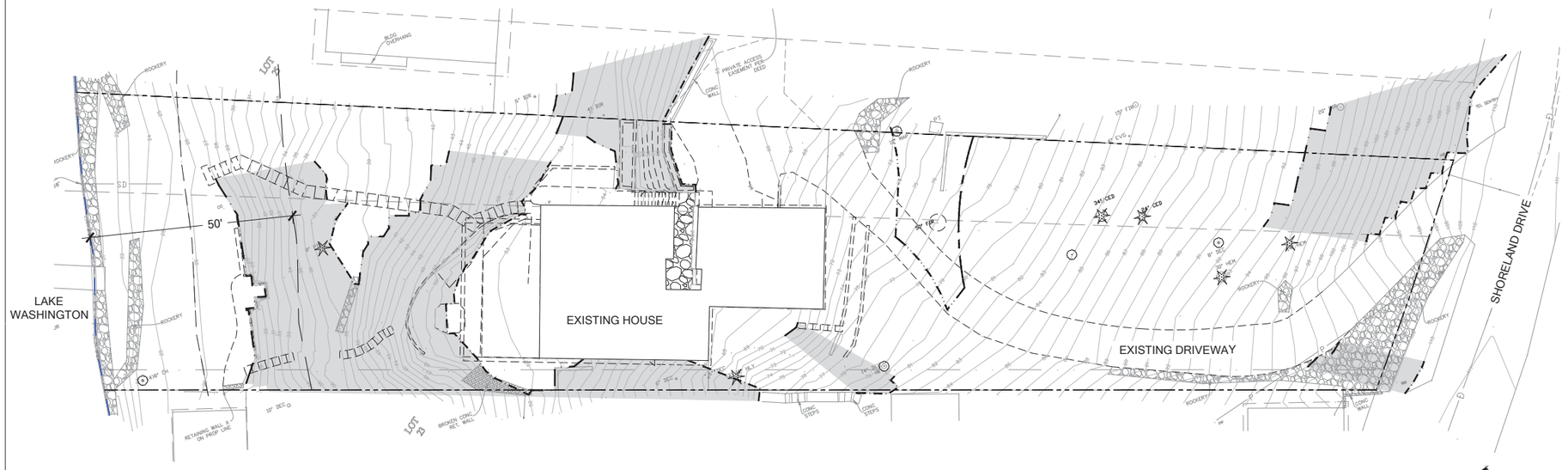


VICINITY MAPS

SHEET INDEX

NOTES

1. SURVEY PERFORMED ON 08/13/18 BY TERRANE. 10801 MAIN STREET, SUITE 102, BELLEVUE, WA 98004. PHONE: (425)458-4488.



LEGEND

- PARCEL BOUNDARY
- STEEP SLOPE AREA
- TOP OF SLOPE
- TOE OF SLOPE
- TOP OF SLOPE BUFFER (50-FT)
- TOE OF SLOPE SETBACK (75-FT)
- SHORELINE OHWM
- 50-FT SHORELINE STRUCTURE SETBACK

EXISTING CONDITIONS

SCALE: 1/16" = 1'

0 8' 16' 32' 64'

Know what's **below.** **Call** before you dig.

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750 Sixth Street South
Kirkland WA 98033
p 425.822.5242
www.watershedco.com
Science & Design

MITIGATION PLAN

SADIS PROPERTY DEVELOPMENT
PREPARED FOR: DAVID SADIS
PARCEL # 7768700120
9312 SE SHORELAND DR
BELLEVUE, WA 98004

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
	12-03-18	MITIGATION PLAN	LM

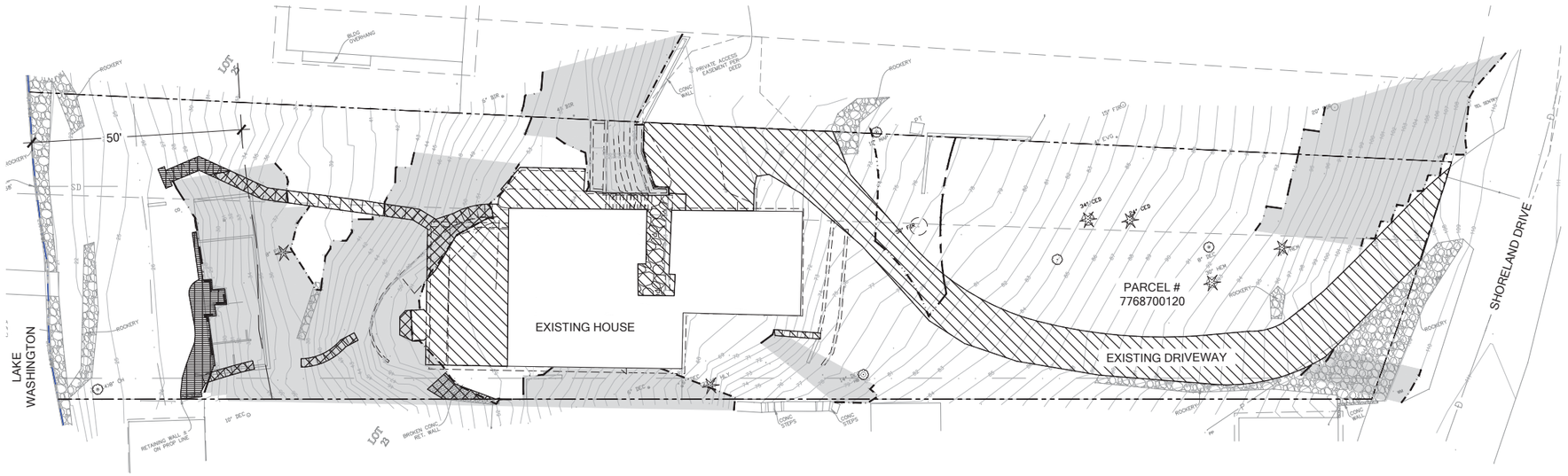
SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: KJB
DESIGNED: LM
DRAFTED: LM
CHECKED: KJB

JOB NUMBER:
180701

SHEET NUMBER:
W1 OF 6

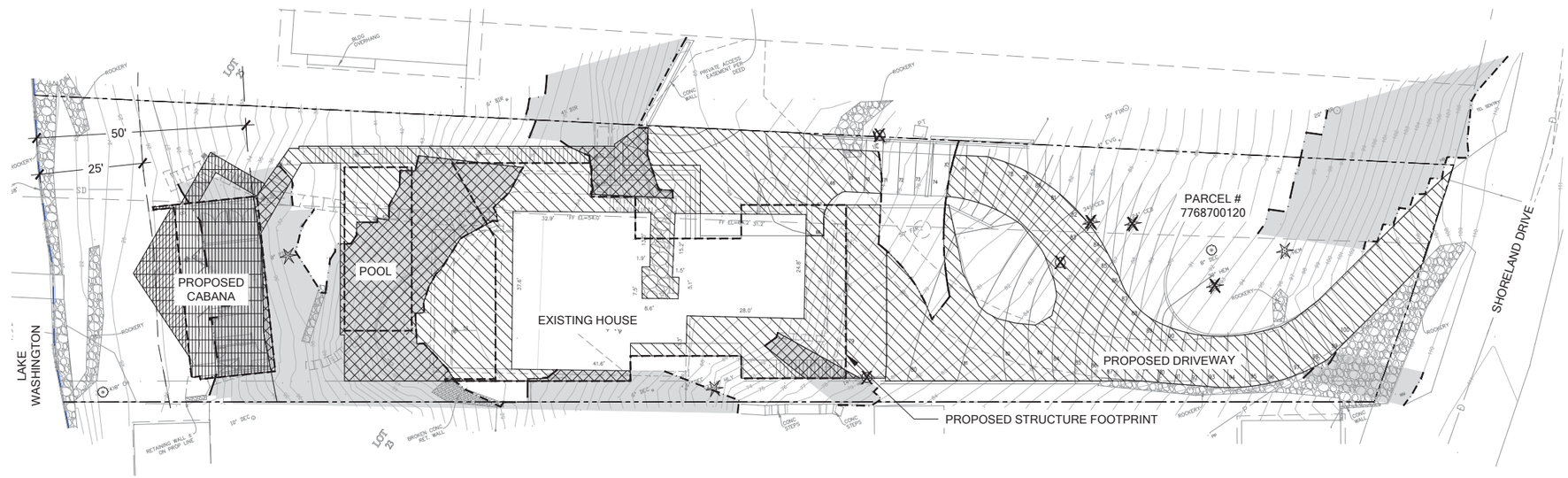
FILENAME
PRINTED BY
DATE



EXISTING IMPACTS

LEGEND

- PARCEL BOUNDARY
- TOP OF SLOPE
- TOE OF SLOPE
- TOP OF SLOPE BUFFER
- TOE OF SLOPE SETBACK
- STEEP SLOPE AREA
- STEEP SLOPE IMPACT (302 SF)
- STEEP SLOPE BUFFER/SETBACK IMPACT (3,726 SF)
- SHORELINE SETBACK IMPACT (215 SF)
- SHORELINE OHWM
- 50-FT SHORELINE STRUCTURE SETBACK



PROPOSED IMPACTS

LEGEND

- PARCEL BOUNDARY
- TOP OF SLOPE
- TOE OF SLOPE
- TOP OF SLOPE BUFFER
- TOE OF SLOPE SETBACK
- STEEP SLOPE AREA
- STEEP SLOPE IMPACT (1,698 SF)
- STEEP SLOPE BUFFER/SETBACK IMPACT (6,475 SF)
- SHORELINE SETBACK IMPACT (1,096 SF)
- SHORELINE OHWM
- 50-FT STANDARD SHORELINE SETBACK
- 25-FT REDUCED SHORELINE SETBACK
- TREE TO BE REMOVED

IMPACTS PLAN

SCALE: 1/16" = 1'

0 8' 16' 32' 64'

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DRAFTED: LM
CHECKED: KJB
JOB NUMBER: 180701
SHEET NUMBER: W2 OF 6

FILENAME
PRINTED BY
DATE

SHORELINE IMPACT INSET PLAN

SCALE: 1" = 10'

LEGEND

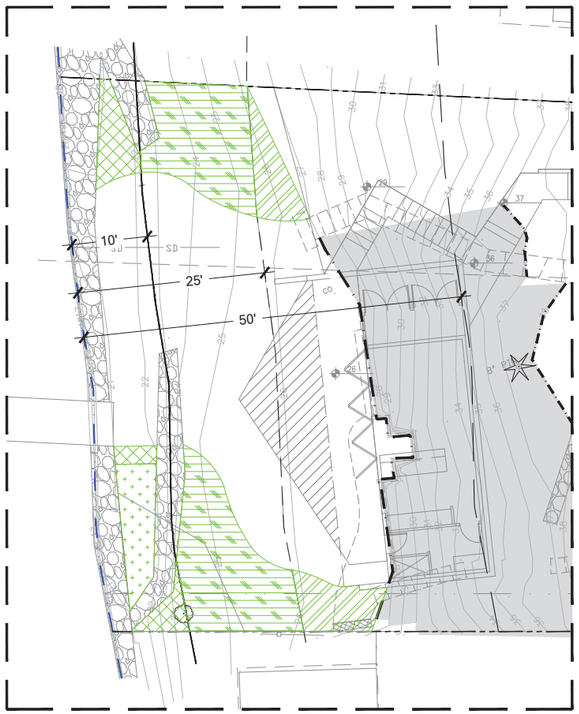
0 TO 25 FEET FROM SHORELINE
LAWN (42 SF)

25 TO 50 FEET FROM SHORELINE
IMPERVIOUS SURFACE (237 SF)

LAWN OR INVASIVE SPECIES (318 SF)

NATIVE VEGETATION (688 SF)

SHORELINE OHWM
50-FT SHORELINE STRUCTURE SETBACK
25-FT SETBACK



SHORELINE MITIGATION INSET PLAN

SCALE: 1" = 10'

LEGEND

NATIVE OVERHANGING VEGETATION
0-10 FEET FROM OHWM (75 SF)
(PURSUANT TO 20.225E.065.F.8.c.iv)

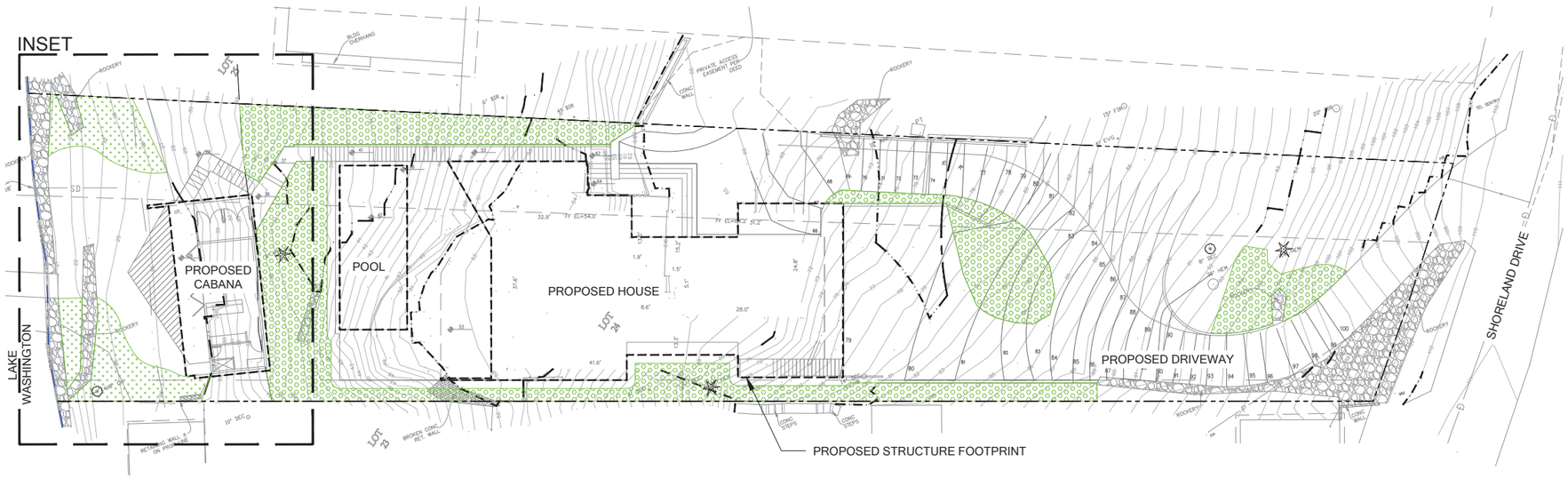
NATIVE OVERHANGING VEGETATION
0-10 FEET FROM OHWM (91 SF)

NATIVE VEGETATION 10-25 FEET FROM
OHWM (428 SF)

NATIVE VEGETATION 25-50 FEET FROM
OHWM (128 SF)

SHORELINE OHWM
50-FT SHORELINE STRUCTURE SETBACK
25-FT SETBACK
10-FT FROM OHWM

INSET



LEGEND

PARCEL BOUNDARY
TOP OF SLOPE
TOE OF SLOPE
TOP OF SLOPE BUFFER
TOE OF SLOPE SETBACK

SHORELINE SETBACK MITIGATION (722 SF)

STEEP SLOPE BUFFER SETBACK
MITIGATION (3,257 SF)

SHORELINE OHWM
OHWM 50-FT BUFFER
OHWM 25-FT BUFFER

SHORELINE IMPACTS & MITIGATION PLAN

SCALE: 1/16" = 1'

0 8' 16' 32' 64'

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CHECKED: KJB
JOB NUMBER: 180701
SHEET NUMBER: W3 OF 6

FILENAME
PRINTED BY
DATE

PLANT SCHEDULE (SHORELINE BUFFER)

		SIZE	SPACING	QTY
	TREES			
	THUJA PLUCATA / WESTERN RED CEDAR	2 GAL	AS SHOWN ON PLANS	4
	SALIX SCOULERIANA / SCOULER'S WILLOW	2 GAL		4
	SHRUBS			
	LONICERA INVOLUCRATA / TWINBERRY	1 GAL	6' O.C.	13
	CORNUS SERICEA / REDTWIG DOGWOOD	1 GAL	4' O.C.	13
	RIBES SANGUINEUM / RED-FLOWERING CURRENT	1 GAL	4' O.C.	13
	MAHONIA AQUIFOLIUM / TALL OREGON GRAPE	1 GAL	4' O.C.	13
	GROUNDCOVER			
	POLYSTICHUM MUNITUM / SWORD FERN	1 GAL	24" O.C.	48
	FRAGARIA CHILOENSIS / BEACH STRAWBERRY	1 GAL	24" O.C	48
	GUALTHERIA SHALLON / SALAL	1 GAL	24" O.C	48

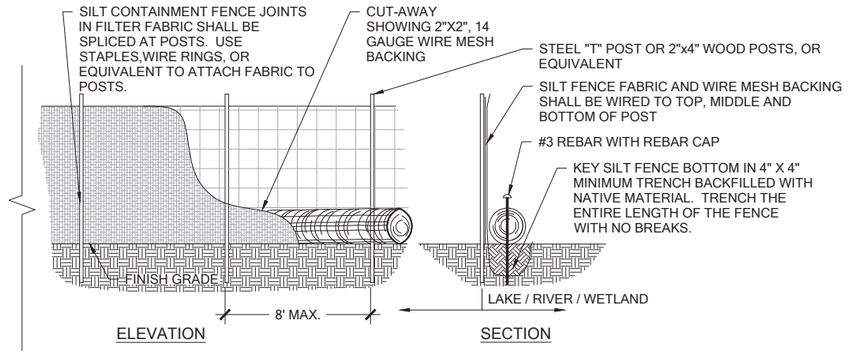
PLANT SCHEDULE (STEEP SLOPE & BUFFER)

		SIZE	SPACING	QTY
	TREES			
	PSEUDOTSUGA MENZIESII / DOUGLAS-FIR	2 GAL	AS SHOWN ON PLANS	3
	THUJA PLUCATA / WESTERN RED CEDAR	2 GAL		4
	TSUGA MERTENSIANA / MOUNTAIN HEMLOCK	2 GAL		4
	ACER CIRCINATUM / VINE MAPLE	2 GAL		5
	SHRUBS			
	OEMLERIA CERASIFORMIS / OSOBERRY	1 GAL	6' O.C.	44
	SYMPHORICARPUS ALBUS / SNOWBERRY	1 GAL	4' O.C.	44
	RIBES SANGUINEUM / RED-FLOWERING CURRENT	1 GAL	4' O.C.	44
	MAHONIA AQUIFOLIUM / TALL OREGON GRAPE	1 GAL	4' O.C.	44
	GROUNDCOVER			
	POLYSTICHUM MUNITUM / SWORD FERN	1 GAL	24" O.C.	170
	FRAGARIA CHILOENSIS / BEACH STRAWBERRY	1 GAL	24" O.C.	170
	GUALTHERIA SHALLON / SALAL	1 GAL	24" O.C.	170

NOTES

1. PIT AMEND WHERE EXISTING NATIVE SPECIES ARE PRESENT ON STEEP SLOPES AND IN BUFFER AREAS (W5, D).
2. IN SHORELINE BUFFER PLANTING AREA AMEND EXISTING SOILS (W5, E)

SILT FENCE MAINTENANCE STANDARDS:
1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION EXCEEDS 6" IN DEPTH.



A SILT FENCE & BIODEGRADABLE WATTLE

Scale: NTS

SILT FENCE MAINTENANCE STANDARDS:
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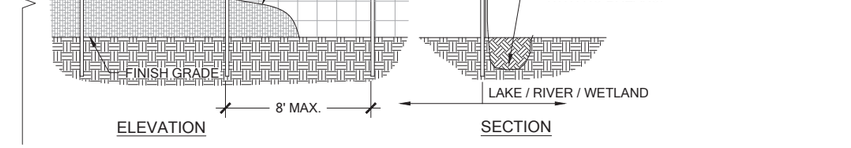
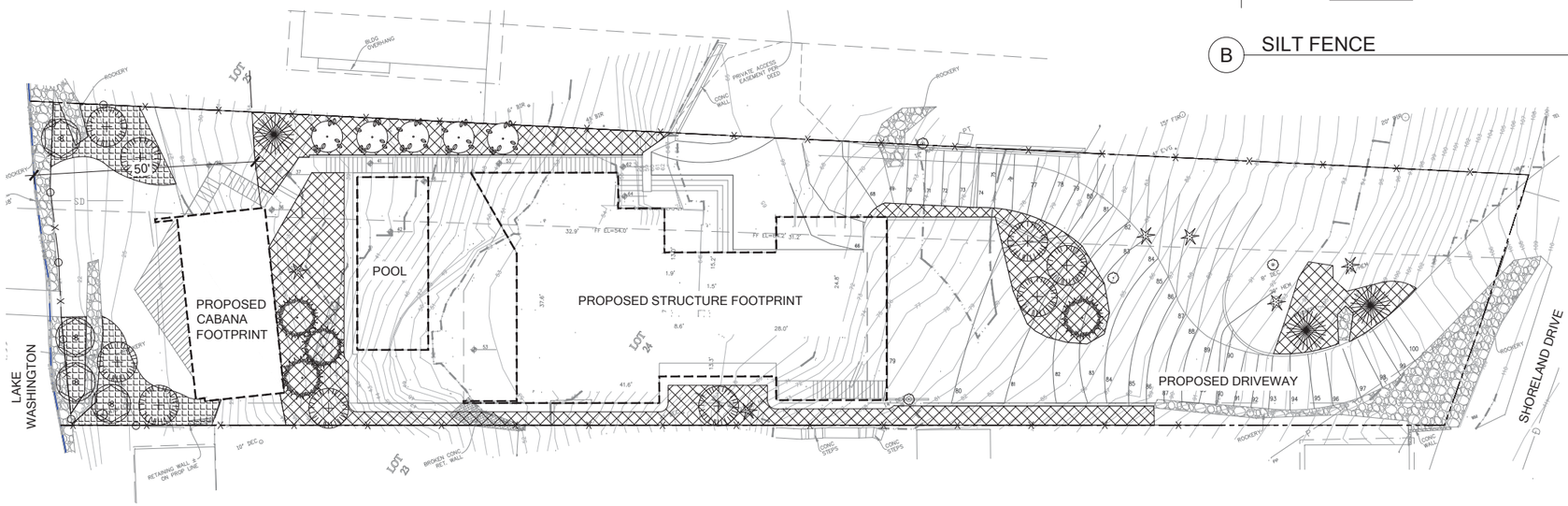


B SILT FENCE

Scale: NTS



LEGEND

- PARCEL BOUNDARY
- TOP OF SLOPE
- TOE OF SLOPE
- TOP OF SLOPE BUFFER
- TOE OF SLOPE SETBACK
- SHORELINE OHWM
- OHWM 50-FT BUFFER
- OHWM 25-FT BUFFER
- SILT FENCE (580-LF) (W4, B)
- SILT FENCE & BIODEGRADABLE WATTLE (235-LF) (W4, A)

PLANTING PLAN

SCALE: 1/16" = 1'

0 8' 16' 32' 64'

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DESIGNED: LM
DRAFTED: LM
CHECKED: KJB
JOB NUMBER: 180701
SHEET NUMBER: W4 OF 6

FILENAME
PRINTED BY
DATE

PLANT INSTALLATION SPECIFICATIONS

GENERAL NOTES

QUALITY ASSURANCE
1. PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
2. PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
3. TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
4. NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 1973 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

DEFINITIONS
1. PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC..; SPRIGS, PLUGS, AND LINERS.
2. CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
2. SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
3. IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
4. SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION
1. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
2. PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
3. THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENT OF PLANTS
1. PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
2. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
3. WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.).

SUBMITTALS

PROPOSED PLANT SOURCES
1. WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES
1. PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
2. HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION
CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS
1. TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
2. SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
3. HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
4. LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY
PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

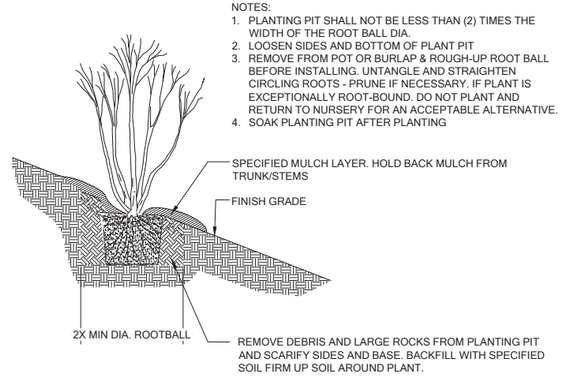
REPLACEMENT
1. PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE CONSULTANT'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
2. PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLANT MATERIAL

GENERAL
1. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

QUANTITIES
SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

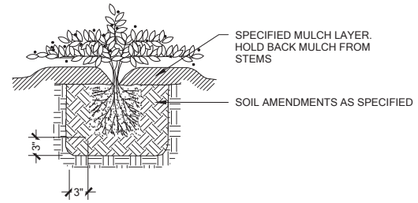
ROOT TREATMENT
1. CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
2. PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
3. ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.



NOTES:
1. PLANTING PIT SHALL NOT BE LESS THAN (2) TIMES THE WIDTH OF THE ROOT BALL DIA.
2. LOOSEN SIDES AND BOTTOM OF PLANT PIT
3. REMOVE FROM POT OR BURLAP & ROUGH-UP ROOT BALL BEFORE INSTALLING. UNTANGLE AND STRAIGHTEN CIRCLING ROOTS - PRUNE IF NECESSARY. IF PLANT IS EXCEPTIONALLY ROOT-BOUND. DO NOT PLANT AND RETURN TO NURSERY FOR AN ACCEPTABLE ALTERNATIVE.
4. SOAK PLANTING PIT AFTER PLANTING

A TREE AND SHRUB PLANTING

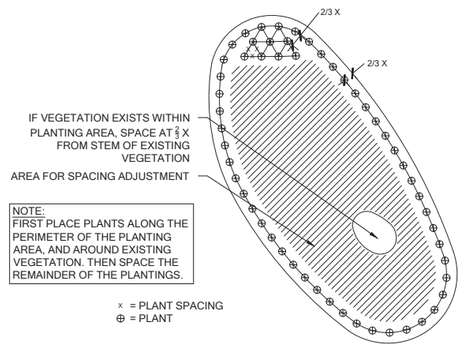
Scale: NTS



NOTES:
1. PLANT GROUNDCOVER AT SPECIFIED DISTANCE ON-CENTER (O.C.) USING TRIANGULAR SPACING, TYP.
2. LOOSEN SIDES AND BOTTOM OF PLANTING PIT AND REMOVE DEBRIS
3. LOOSEN ROOTBOUND PLANTS BEFORE INSTALLING
4. SOAK PIT BEFORE AND AFTER INSTALLING PLANT

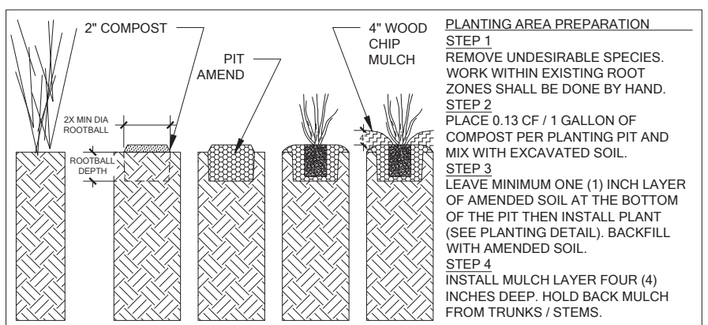
B GROUNDCOVER PLANTING

Scale: NTS



C PLANT SPACING

Scale: NTS

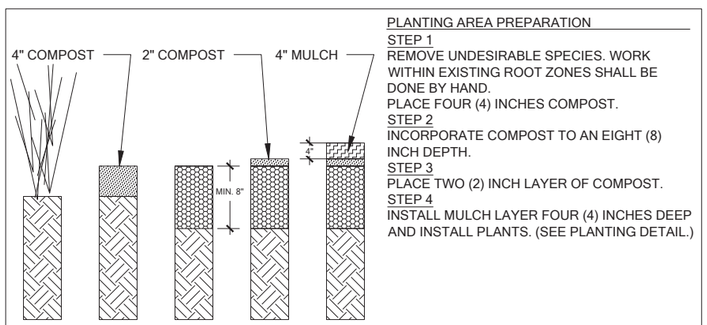


PLANTING AREA PREPARATION
STEP 1
REMOVE UNDESIRABLE SPECIES. WORK WITHIN EXISTING ROOT ZONES SHALL BE DONE BY HAND.
STEP 2
PLACE 0.13 CF / 1 GALLON OF COMPOST PER PLANTING PIT AND MIX WITH EXCAVATED SOIL.
STEP 3
LEAVE MINIMUM ONE (1) INCH LAYER OF AMENDED SOIL AT THE BOTTOM OF THE PIT THEN INSTALL PLANT (SEE PLANTING DETAIL). BACKFILL WITH AMENDED SOIL.
STEP 4
INSTALL MULCH LAYER FOUR (4) INCHES DEEP. HOLD BACK MULCH FROM TRUNKS / STEMS.

SEQUENCE OF WORK - NOT TO SCALE

D SOIL PREP 1: PIT AMEND (INFILL PLANTING)

Scale: NTS



PLANTING AREA PREPARATION
STEP 1
REMOVE UNDESIRABLE SPECIES. WORK WITHIN EXISTING ROOT ZONES SHALL BE DONE BY HAND.
PLACE FOUR (4) INCHES COMPOST.
STEP 2
INCORPORATE COMPOST TO AN EIGHT (8) INCH DEPTH.
STEP 3
PLACE TWO (2) INCH LAYER OF COMPOST.
STEP 4
INSTALL MULCH LAYER FOUR (4) INCHES DEEP AND INSTALL PLANTS. (SEE PLANTING DETAIL.)

SEQUENCE OF WORK - NOT TO SCALE

E SOIL PREP 2: AMEND EXISTING SOILS

Scale: NTS

PLANT INSTALLATION SPECIFICATIONS & DETAILS

811 Know what's below. Call before you dig.

THE WATERSHED COMPANY
750 Sixth Street South
Kirkland WA 98033
p 425.822.5242
www.watershedco.com
Science & Design

MITIGATION PLAN
SADIS PROPERTY DEVELOPMENT
PREPARED FOR: DAVID SADIS
PARCEL # 7768700120
9312 SE SHORELAND DR
BELLEVUE, WA 98004

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
	12-03-18	MITIGATION PLAN	LM

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: KJB
DESIGNED: LM
DRAFTED: LM
CHECKED: KJB
JOB NUMBER:
180701
SHEET NUMBER:
W5 OF 6

FILENAME
PRINTED BY
DATE

MITIGATION & MONITORING NOTES

MITIGATION & MONITORING NOTES THE PROPOSED MITIGATION PLAN SEEKS TO ENHANCE PORTIONS OF THE ON-SITE SHORELINE BUFFER AS WELL AS UPLAND AREAS OF STEEP SLOPE AND STEEP SLOPE BUFFER AND SETBACK. AN AREA 722 SQUARE FEET IN SIZE IN THE SHORELINE (WITHIN 50-FT OF THE OHWM) AND 3,257 SQUARE FEET IN SIZE ON UPLAND STEEP SLOPES AND STEEP SLOPE BUFFERS/SETBACKS WILL BE RESTORED BY REMOVING INVASIVE VEGETATION AND PLANTING A VARIETY OF NATIVE TREES, SHRUBS, AND GROUNDCOVER IN SUITABLE LOCATIONS. SPECIES INCLUDE DOUGLAS-FIR, WESTERN REDCEDAR, CASCARA, SCOULER'S WILLOW, OSOBERRY, TWINBERRY, RED-FLOWERING CURRANT, SNOWBERRY, TALL OREGON GRAPE, SWORD FERN, BEACH STRAWBERRY, AND SALAL.

MAINTENANCE AND MONITORING PLAN

THE SITE SHALL BE MAINTAINED AND MONITORED FOR FIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION. COMPONENTS OF THE 5-YEAR MAINTENANCE AND MONITORING PLAN ARE DETAILED BELOW.

GOALS
1. ESTABLISH DENSE NATIVE VEGETATION THAT IS APPROPRIATE TO THE ECO-REGION AND SITE.
2. LIMIT INVASIVE AND/OR NOXIOUS WEED COVER ON-SITE.
3. INCREASE OVERHANGING NATIVE VEGETATION ON LAKE WASHINGTON.
4. INCREASE HABITAT COVER AND REFUGE FOR URBAN WILDLIFE SPECIES. PROVIDE PERCHING, NESTING AND FORAGING HABITAT FOR NATIVE BIRDS.

PERFORMANCE STANDARDS
THE STANDARDS LISTED BELOW WILL BE USED TO JUDGE THE SUCCESS OF THE INSTALLATION OVER TIME. IF PERFORMANCE STANDARDS ARE MET AT THE END OF YEAR 5, THE SITE WILL THEN BE DEEMED SUCCESSFUL AND THE PERFORMANCE SECURITY BOND WILL BE ELIGIBLE FOR RELEASE BY THE CITY OF BELLEVUE.

1. SURVIVAL: ACHIEVE 100% SURVIVAL OF INSTALLED PLANTS BY THE END OF YEAR 1. THIS STANDARD CAN BE MET THROUGH PLANT ESTABLISHMENT OR THROUGH REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
2. NATIVE PLANT COVER:
   A. ACHIEVE 40% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 2. RETAINED VEGETATION AND NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
   B. ACHIEVE 60% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 3. RETAINED VEGETATION AND NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
   C. ACHIEVE 80% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 5. RETAINED VEGETATION AND NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
3. SPECIES DIVERSITY: ESTABLISH AT LEAST THREE NATIVE TREE AND FOUR NATIVE SHRUB SPECIES BY YEAR 3 AND MAINTAIN THIS DIVERSITY THROUGH YEAR 5. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.
4. INVASIVE COVER: AERIAL COVER FOR ALL NON-NATIVE, INVASIVE AND NOXIOUS WEEDS WILL NOT EXCEED 10% AT ANY YEAR DURING THE MONITORING PERIOD. INVASIVE PLANTS INCLUDE BUT ARE NOT LIMITED TO HIMALAYAN BLACKBERRY (RUBUS ARMENIACUS), CUT LEAF BLACKBERRY (RUBUS LACINIATUS, KNOTWEEDS (POLYGONUM CUSPIDATUM AND OTHERS), REED CANARYGRASS (PHALARIS ARUNDINACEA), CHERRY (HEDGE) LAUREL (PRUNUS LAUROCERASUS), ENGLISH HOLLY (ILEX AQUIFOLIUM), AND IVY SPECIES (HEDERA SPP.).

MONITORING METHODS
THIS MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE MITIGATION SITE OVER TIME AND TO MEASURE THE DEGREE TO WHICH THE SITE IS MEETING THE PERFORMANCE STANDARDS OUTLINED IN THE PRECEDING SECTION.

AN AS-BUILT PLAN WILL BE PREPARED BY THE RESTORATION PROFESSIONAL PRIOR TO THE BEGINNING OF THE MONITORING PERIOD. THE AS-BUILT PLAN WILL BE A MARK-UP OF THE PLANTING PLANS INCLUDED IN THIS PLAN SET. THE AS-BUILT PLAN WILL DOCUMENT ANY DEPARTURES IN PLANT PLACEMENT OR OTHER COMPONENTS FROM THE PROPOSED PLAN.

MONITORING WILL TAKE PLACE ONCE ANNUALLY IN THE FALL FOR FIVE YEARS. YEAR-1 MONITORING WILL COMMENCE IN THE FIRST FALL SUBSEQUENT TO INSTALLATION. THE FORMAL MONITORING VISIT SHALL RECORD AND REPORT THE FOLLOWING IN AN ANNUAL REPORT SUBMITTED TO THE CITY OF BELLEVUE:

1. VISUAL ASSESSMENT OF THE OVERALL SITE.
2. YEAR-1 COUNTS OF LIVE AND DEAD PLANTS BY SPECIES. YEAR-2 THROUGH YEAR-5 COUNTS OF ESTABLISHED NATIVE TREES AND SHRUBS BY SPECIES, TO THE EXTENT FEASIBLE.
3. COUNTS OF DEAD PLANTS WHERE MORTALITY IS SIGNIFICANT IN ANY MONITORING YEAR.
4. ESTIMATE OF NATIVE COVER IN THE MITIGATION AREA.
5. ESTIMATE OF NON-NATIVE, INVASIVE WEED COVER IN THE MITIGATION AREA.
6. TABULATION OF ESTABLISHED NATIVE SPECIES, INCLUDING BOTH PLANTED AND VOLUNTEER SPECIES.
7. PHOTOGRAPHIC DOCUMENTATION FROM AT LEAST THREE FIXED REFERENCE POINTS.
8. ANY INTRUSIONS INTO OR CLEARING OF THE PLANTING AREAS, VANDALISM, OR OTHER ACTIONS THAT IMPAIR THE INTENDED FUNCTIONS OF THE MITIGATION AREA.
9. RECOMMENDATIONS FOR MAINTENANCE OR REPAIR OF ANY PORTION OF THE MITIGATION AREA.

MAINTENANCE
THE SITE WILL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS FOR AT LEAST FIVE YEARS FOLLOWING COMPLETION OF CONSTRUCTION:

1. FOLLOW THE RECOMMENDATIONS NOTED IN THE PREVIOUS MONITORING SITE VISIT.
2. GENERAL WEEDING FOR ALL PLANTED AREAS:
   A. AT LEAST TWICE YEARLY, REMOVE ALL COMPETING WEEDS AND WEED ROOTS FROM BENEATH EACH INSTALLED PLANT AND ANY DESIRABLE VOLUNTEER VEGETATION TO A DISTANCE OF 18 INCHES FROM THE MAIN PLANT STEM. WEEDING SHOULD OCCUR AT LEAST TWICE DURING THE SPRING AND SUMMER. FREQUENT WEEDING WILL RESULT IN LOWER MORTALITY, LOWER PLANT REPLACEMENT COSTS, AND INCREASED LIKELIHOOD THAT THE PLAN MEETS PERFORMANCE STANDARDS BY YEAR 5.
   B. MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLAN INSTALLATION.
   C. DO NOT WEED THE AREA NEAR THE PLANT BASES WITH STRING TRIMMER (WEED WHACKER/WEED EATER). NATIVE PLANTS ARE EASILY DAMAGED OR KILLED, AND WEEDS EASILY RECOVER AFTER TRIMMING.
   D. SELECTIVE APPLICATIONS OF HERBICIDE MAY BE NEEDED TO CONTROL INVASIVE WEEDS, ESPECIALLY WHEN INTERMIXED WITH NATIVE SPECIES. HERBICIDE APPLICATION, WHEN NECESSARY, SHALL BE CONDUCTED ONLY BY A STATE-LICENSED APPLICATOR.
3. APPLY SLOW-RELEASE, GRANULAR FERTILIZER TO EACH INSTALLED PLANT ANNUALLY IN THE SPRING (BY JUNE 1) OF YEARS 2 THROUGH 5.
4. REPLACE MULCH AS NECESSARY TO MAINTAIN A 4-INCH-THICK LAYER, RETAIN SOIL MOISTURE, AND LIMIT WEEDS.
5. REPLACE EACH PLANT FOUND DEAD IN THE SUMMER MONITORING VISITS DURING THE UPCOMING DORMANT SEASON (OCTOBER 15 TO MARCH 1), FOR BEST SURVIVAL.
6. THE PROPERTY OWNER WILL ENSURE THAT WATER IS PROVIDED FOR THE ENTIRE PLANTED AREA WITH A MINIMUM OF 1 INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION, THROUGH HAND-WATERING OR THE OPERATION OF A TEMPORARY IRRIGATION SYSTEM. LESS WATER IS NEEDED DURING MARCH, APRIL, MAY AND OCTOBER.

GENERAL WORK SEQUENCE

SITE PREPARATION
1. INSTALL SILT FENCE AND BIODEGRADABLE WATTLE PER PLANS.
2. MANUALLY CLEAR INVASIVE AND ORNAMENTAL VEGETATION FROM MITIGATION AREA DURING SPRING AND/OR SUMMER MONTHS (I.E., AVOID CREATING EXPOSED SOIL CONDITIONS DURING THE WINTER STORM SEASON).
   A. REMOVE INVASIVE SPECIES (I.E., HIMALAYAN BLACKBERRY, ENGLISH IVY), IN ACCORDANCE WITH KING COUNTY NOXIOUS WEED BEST MANAGEMENT PRACTICES. FOR MORE INFORMATION: HTTPS://WWW.KINGCOUNTY.GOV/SERVICES/ENVIRONMENT/ANIMALS-AND-PLANTS/NOXIOUS-WEEDS.ASPX.
   B. WITHIN APPROXIMATELY FIVE FEET OF PROPERTY BOUNDARIES, CUT UNDESIRABLE VEGETATION. LEAVE ROOTS INTACT TO MINIMIZE POTENTIAL IMPACTS TO SLOPES ON ADJACENT PROPERTIES.
   C. FLUSH-CUT ORNAMENTAL WOODY VEGETATION (E.G. ENGLISH HOLLY) THROUGHOUT MITIGATION AREA AND IMMEDIATELY TREAT STEM (DAUBING OR PAINTING) WITH APPROPRIATE HERBICIDE. PERSON APPLYING HERBICIDE SHALL BE STATE-LICENSED. DO NOT REMOVE SUBSURFACE ROOTS.
   D. AVOID AND MINIMIZE DISTURBANCE AND/OR COMPACTION TO ROOTS OF ESTABLISHED NATIVE TREES TO BE RETAINED WHEN REMOVING VEGETATION FROM WITHIN TREE DRIPLINES.
3. BLANKET-MULCH CLEARED AREAS OR RING MULCH AROUND INSTALLED AND EXISTING NATIVE PLANTS WITH WOOD MULCH, FOUR INCHES THICK.
   A. ENSURE MULCH DOES NOT TOUCH STEMS OF EXISTING (OR INSTALLED) VEGETATION. SEE PLANTING DETAIL ON SHEET W5.

MITIGATION PLANTING AND IRRIGATION
1. INSTALL MITIGATION PLANTS DURING THE DORMANT SEASON (OCTOBER 15 - MARCH 1).
   A. PREPARE A PLANTING PIT FOR EACH PLANT THROUGH BLANKET WOOD MULCH AND INSTALL PER THE PLANTING DETAILS.
2. INSTALL A TEMPORARY, ABOVE GROUND IRRIGATION SYSTEM TO PROVIDE FULL COVERAGE TO ALL INSTALLED PLANTS WITHIN THE RESTORATION AREA.

MATERIAL SPECIFICATIONS AND DEFINITIONS

1. FERTILIZER (FOR NEAR AQUATIC ENVIRONMENTS): SLOW-RELEASE, PHOSPHOROUS-FREE GRANULAR FERTILIZER. LABEL MUST INDICATE THAT PRODUCT IS SAFE FOR AQUATIC ENVIRONMENTS. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR USE. KEEP FERTILIZER IN WEATHER-TIGHT CONTAINER WHILE ON-SITE. FERTILIZER IS ONLY TO BE APPLIED IN YEARS TWO AND THREE, NOT IN YEAR ONE.
2. IRRIGATION SYSTEM: AUTOMATED SYSTEM CAPABLE OF DELIVERING AT LEAST ONE INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION.
3. RESTORATION PROFESSIONAL: WATERSHED COMPANY [(425) 822-5242] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS.
4. WOODCHIP MULCH: "ARBORIST CHIPS" (CHIPPED WOODY MATERIAL) APPROXIMATELY ONE TO THREE INCHES IN MAXIMUM DIMENSION (NOT SAWDUST). THIS MATERIAL IS COMMONLY AVAILABLE IN LARGE QUANTITIES FROM ARBORISTS OR TREE-PRUNING COMPANIES. MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/DEMOLITION DEBRIS.
5. COMPOST: COMPOST SHALL MEET WSDOT STANDARDS SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, 9-14.4(8) FOR FINE COMPOST.

CONTINGENCIES
IF THERE IS A SIGNIFICANT PROBLEM WITH THE RESTORATION AREAS MEETING PERFORMANCE STANDARDS, A CONTINGENCY PLAN WILL BE DEVELOPED AND IMPLEMENTED. CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO: SOIL AMENDMENT, ADDITIONAL PLANT INSTALLATION, AND PLANT SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION.

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THE WATERSHED COMPANY
750 Sixth Street South
Kirkland WA 98033
p 425.822.5242
www.watershedco.com
Science & Design

MITIGATION PLAN
SADIS PROPERTY DEVELOPMENT
PREPARED FOR: DAVID SADIS
PARCEL # 7768700120
9312 SE SHORELAND DR
BELLEVUE, WA 98004

SUBMITTALS & REVISIONS

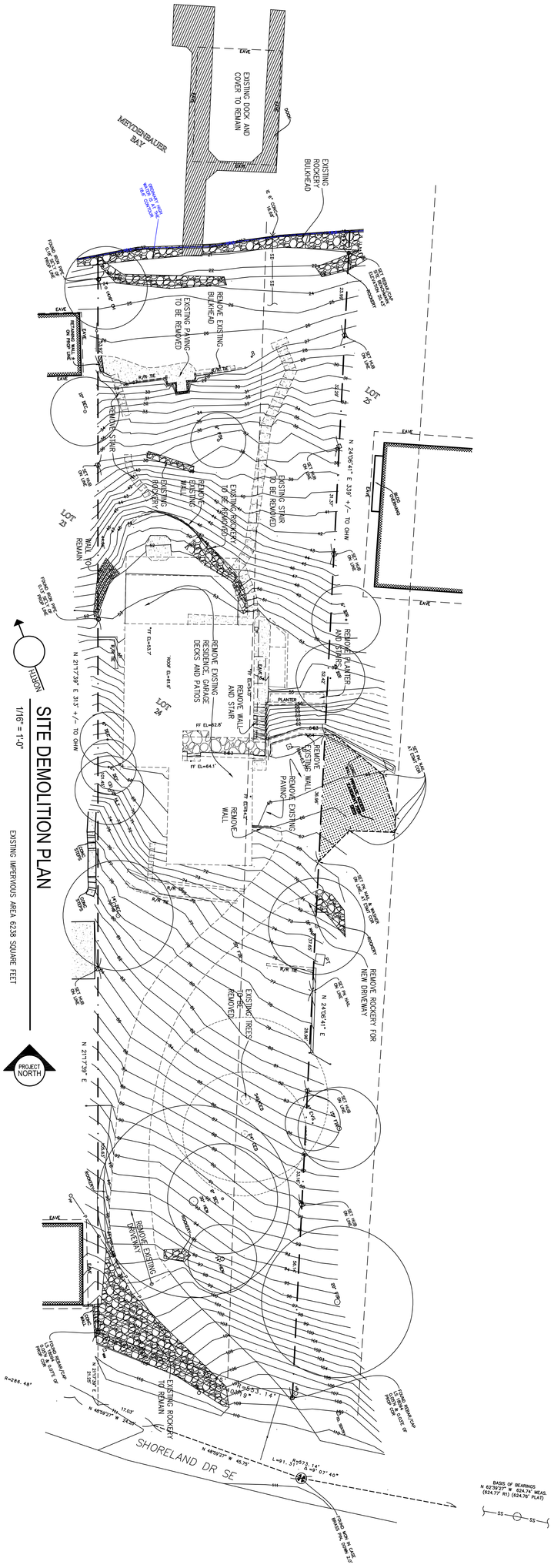
NO.	DATE	DESCRIPTION	BY
	12-03-18	MITIGATION PLAN	LM

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: KJB
DESIGNED: LM
DRAFTED: LM
CHECKED: KJB
JOB NUMBER: 180701
SHEET NUMBER: W6 OF 6

FILENAME
PRINTED BY
DATE

MITIGATION & MONITORING NOTES



1/16" = 1'-0"

SITE DEMOLITION PLAN

EXISTING IMPERVIOUS AREA 6238 SQUARE FEET

SADIS RESIDENCE

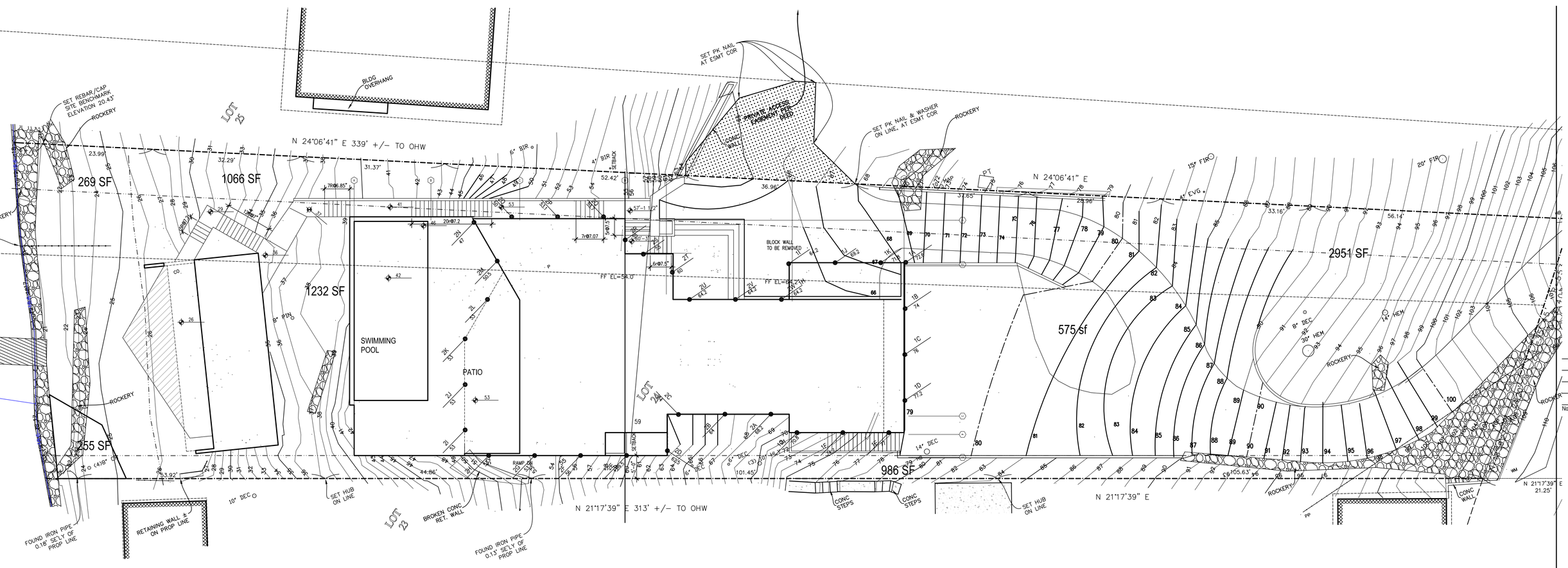
9312 SE SHORELAND DR
BELLEVUE, WA 98004

SITE DEMOLITION PLAN

Sheet No. 0.0
Project No. 1917
Date: 12/5/18

No. Date Revision

CHESMORE | BUCK architecture
27 100TH AVENUE NE, SUITE 100
BELLEVUE, WA 98004
FAX: 425-679-0804
PHONE: 425-679-0907



SITE PLAN

1" = 10'

PROJECT DATA

OWNER

DAVID SADIS

PROJECT DESCRIPTION

NEW SINGLE FAMILY RESIDENCE WITH ADU, CABANA AND SWIMMING POOL

PROJECT DATA

PROJECT ADDRESS

9312 SE SHORELAND DRIVE
BELLEVUE, WA 98004

ZONING

R-4

PARCEL NUMBER

776870-0120

LEGAL DESCRIPTION

LOT AREA 21,610 SQ FT (PER KING CO.)

LESS CRITICAL AREAS > 1000 SF(2,890) NET LOT AREA 18,720 SQ FT

STRUCTURAL LOT COVERAGE: 35% = MAX ALLOWABLE

CABANA ..... 838 SF
POOL ..... 626 SF

HOUSE AND GARAGE ..... 3,888 SF

TOTAL ..... 5,352 SF/18,720 SF=28.6%

PROPOSED IMPERVIOUS AREA 45% = MAX ALLOWABLE

HOUSE, GARAGE, CABANA, POOL 5,352 SF
DRIVEWAY, WALKS AND STAIRS 8,235 SF
TOTAL ..... 13,587 SF/18,720 SF = 72.6%
13,587 – 45%(18,720) = 5,163 SF OVER ALLOWABLE

PROPOSED HARD SURFACE AREA 75% = MAX ALLOWABLE

13,587 HARD SURFACE – 8,424 ALLOWED IMPERVIOUS = 5,163 SF PERVIOUS CONCRETE REQUIRED

AVAILABLE MITIGATION AREA

185 SF + 430 SF < 25' FROM OHWM
950 SF + 1033 SF + 189 SF = 2172 SF
1834 SF (SOUTH AREA)
TOTAL AREA .....4,621 SF

FLOOR AREA RATIO

18,720 SF (.5) = 9,360 SF MAXIMUM
GROSS FLOOR AREA > 5' ABOVE FINISH GRADE = 5,087 SF

	HEIGHT TABLE 1				
1A	72.6	1F	74.7		
1B	74	1G	70.8		
1C	76	1H	64.2		
1D	77.2	1I	64.2		
1E	77	1J	69.2		
		1K	71.8		

TOTAL = 791.7/11=71.97 AVERAGE EXISTING GRADE

	HEIGHT TABLE 2				
2A	68.2	2K	53	2U	64.2
2B	64	2L	53	2V	64.2
2C	64	2M	50.5	2W	64.2
2D	62.5	2N	47		
2E	59.5	2O	50		
2F	56	2P	53.1		
2G	53.2	2Q	53.7		
2H	53	2R	55		
2I	53	2S	55		
2J	53	2T	60		

TOTAL = 1309.3/23 = 56.93 AVERAGE EXISTING GRADE

EXISTING IMPERVIOUS AREA 45% = MAX ALLOWABLE

HOUSE, GARAGE, CABANA, POOL 6,461 SF
DRIVEWAY, WALKS AND STAIRS
TOTAL ..... 6,461 SF/18,720 SF = 34.5%

CHESMORE|BUCK architecture
27 100TH AVENUE NE, SUITE 100
BELLEVUE, WA 98004
PHONE: 425-679-0804
FAX: 425-679-0907

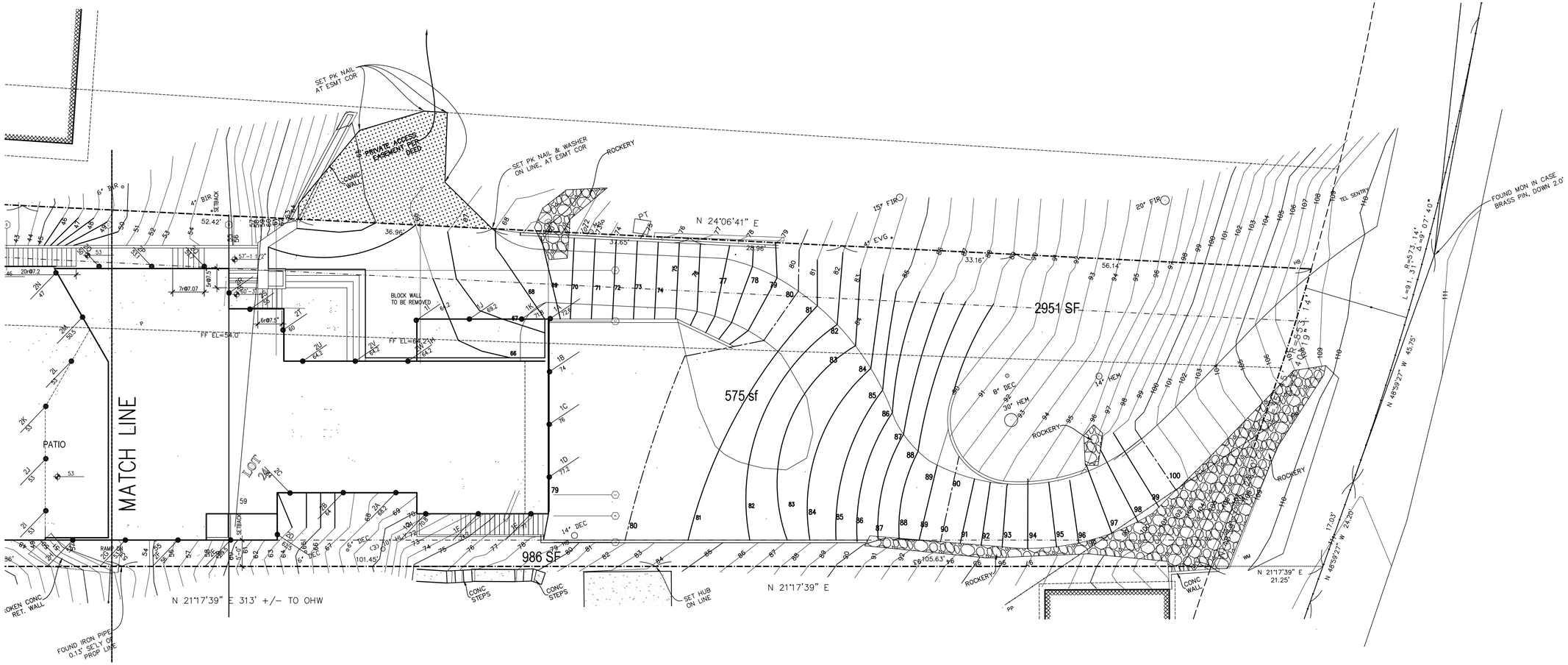
No. Date Revision

SADIS RESIDENCE

9312 SE SHORELAND DR
BELLEVUE, WA 98004

SITE PLAN

Sheet No. 0.1
Project No. 1817
Date: 12/5/18



SITE PLAN

1" = 10'

NORTH

PROJECT DATA

OWNER

DAVID SADIS

PROJECT DESCRIPTION

NEW SINGLE FAMILY RESIDENCE WITH ADU, CABANA AND SWIMMING POOL

PROJECT DATA

PROJECT ADDRESS

9312 SE SHORELAND DRIVE
BELLEVUE, WA 98004

ZONING

R-4

PARCEL NUMBER

776870-0120

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1834 SF (SOUTH AREA)

FLOOR AREA RATIO

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1D	77.2	1I	64.2		
1E	77	1J	69.2		
		1K	71.8		

TOTAL = 791.7/11=71.97 AVERAGE EXISTING GRADE

	HEIGHT TABLE 2				
2A	68.2	2K	53	2U	64.2
2B	64	2L	53	2V	64.2
2C	64	2M	50.5	2W	64.2
2D	62.5	2N	47		
2E	59.5	2O	50		
2F	56	2P	53.1		
2G	53.2	2Q	53.7		
2H	53	2R	55		
2I	53	2S	55		
2J	53	2T	60		

TOTAL = 1309.3/23 = 56.93 AVERAGE EXISTING GRADE

EXISTING IMPERVIOUS AREA 45% = MAX ALLOWABLE

HOUSE, GARAGE, CABANA, POOL 6,461 SF
DRIVEWAY, WALKS AND STAIRS
TOTAL ..... 6,461 SF/18,720 SF = 34.5%

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PHONE: 425-679-0804
FAX: 425-679-0907

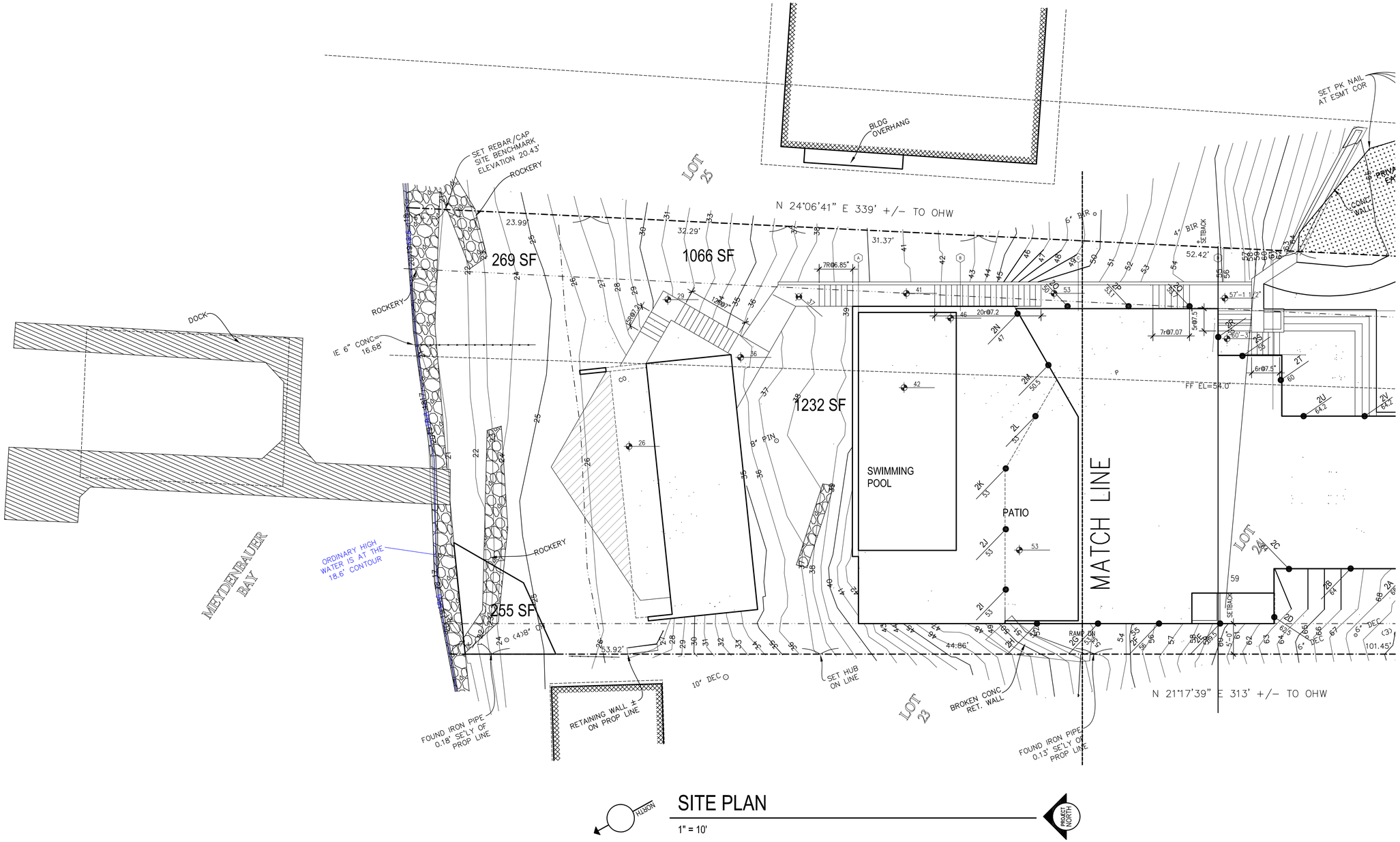
No.	Date	Revision

SADIS RESIDENCE

9312 SE SHORELAND DR
BELLEVUE, WA 98004

SITE PLAN

Sheet No. 1.0
Project No. 1817
Date: 12/5/18



SITE PLAN

1" = 10'

CHESMORE|BUCK architecture
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FAX: 425-679-0907

No.	Date	Revision

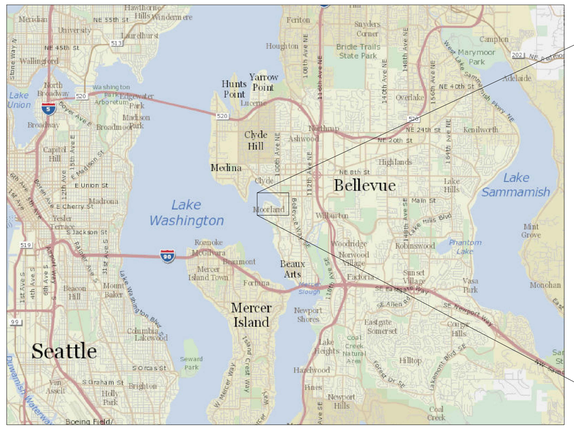
SADIS RESIDENCE

9312 SE SHORELAND DR
BELLEVUE, WA 98004

SITE PLAN

Sheet No.	1.1
Project No.	1817
Date:	12/5/18

SADIS MITIGATION PLAN

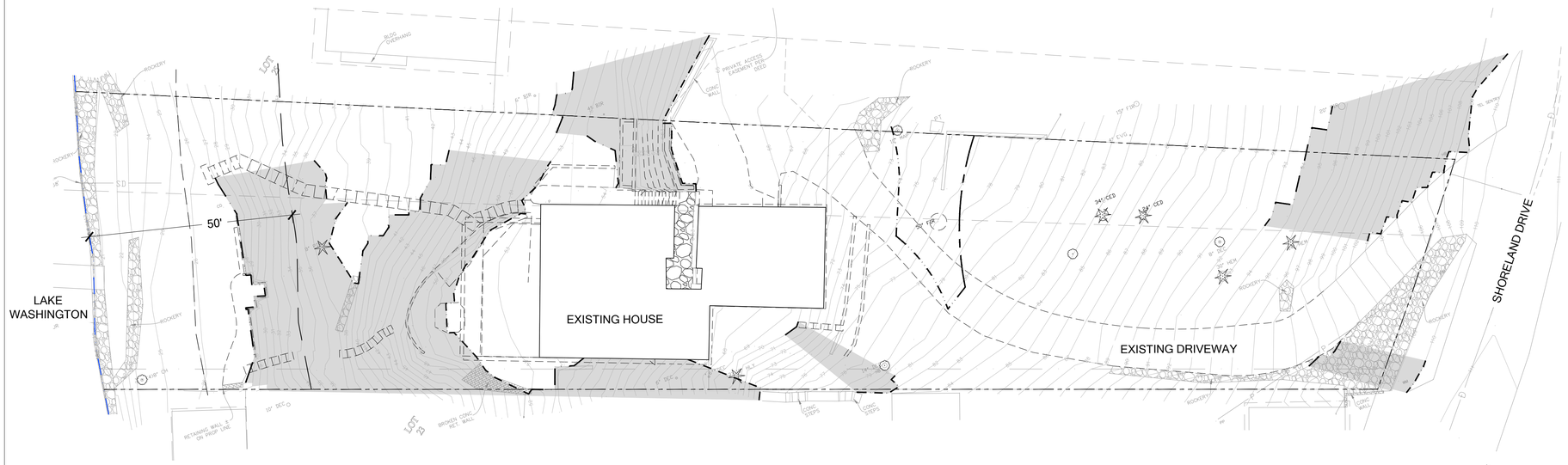


VICINITY MAPS

SHEET INDEX

NOTES

1. SURVEY PERFORMED ON 08/13/18 BY TERRANE. 10801 MAIN STREET, SUITE 102, BELLEVUE, WA 98004. PHONE: (425)458-4488.



LEGEND

- PARCEL BOUNDARY
- STEEP SLOPE AREA
- TOP OF SLOPE
- TOE OF SLOPE
- TOP OF SLOPE BUFFER (50-FT)
- TOE OF SLOPE SETBACK (75-FT)
- SHORELINE OHWM
- 50-FT SHORELINE STRUCTURE SETBACK

EXISTING CONDITIONS

SCALE: 1/16" = 1'

0 8' 16' 32' 64'

Know what's **below.** **Call** before you dig.

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750 Sixth Street South
Kirkland WA 98033

p 425.822.5242
www.watershedco.com

Science & Design

MITIGATION PLAN

SADIS PROPERTY DEVELOPMENT
PREPARED FOR: DAVID SADIS
PARCEL # 7768700120
9312 SE SHORELAND DR
BELLEVUE, WA 98004

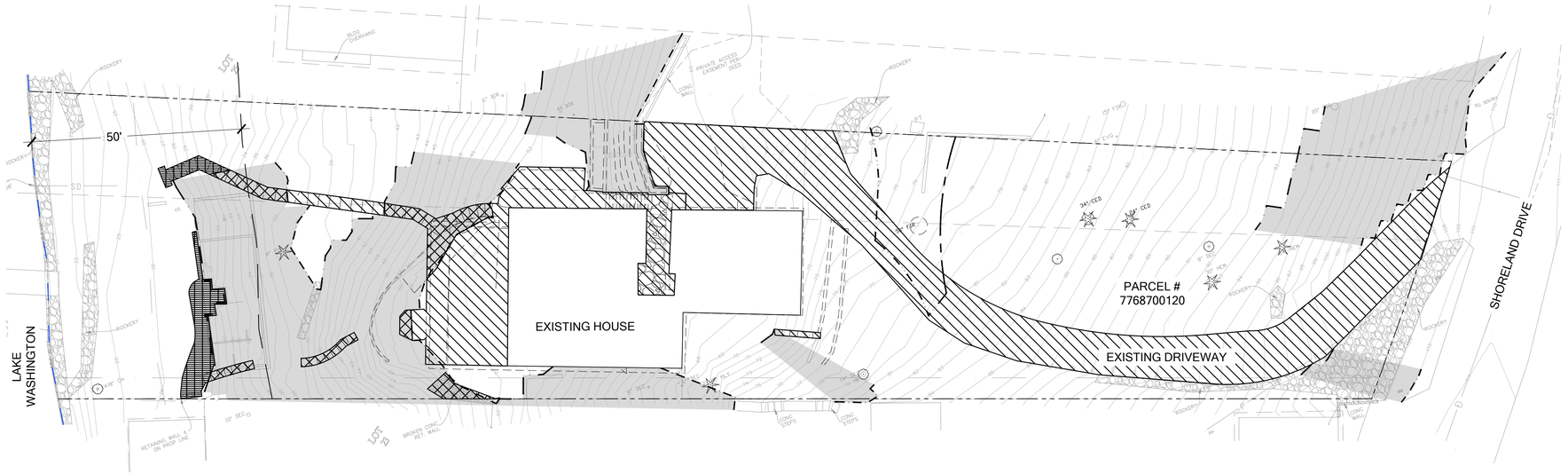
SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
	12-03-18	MITIGATION PLAN	LM

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: KJB
DESIGNED: LM
DRAFTED: LM
CHECKED: KJB
JOB NUMBER:
180701
SHEET NUMBER:
W1 OF 6

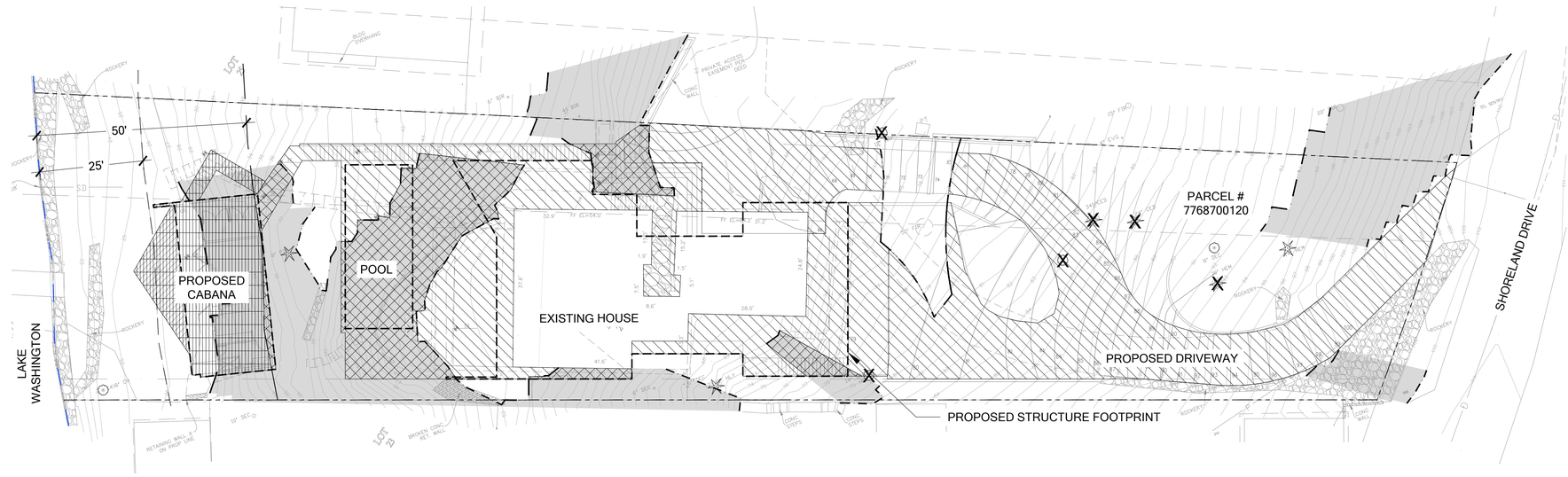
FILENAME
PRINTED BY
DATE



EXISTING IMPACTS

LEGEND

- PARCEL BOUNDARY
- TOP OF SLOPE
- TOE OF SLOPE
- TOP OF SLOPE BUFFER
- TOE OF SLOPE SETBACK
- STEEP SLOPE AREA
- STEEP SLOPE IMPACT (302 SF)
- STEEP SLOPE BUFFER/SETBACK IMPACT (3,726 SF)
- SHORELINE SETBACK IMPACT (215 SF)
- SHORELINE OHWM
- 50-FT SHORELINE STRUCTURE SETBACK



PROPOSED IMPACTS

LEGEND

- PARCEL BOUNDARY
- TOP OF SLOPE
- TOE OF SLOPE
- TOP OF SLOPE BUFFER
- TOE OF SLOPE SETBACK
- STEEP SLOPE AREA
- STEEP SLOPE IMPACT (1,698 SF)
- STEEP SLOPE BUFFER/SETBACK IMPACT (6,475 SF)
- SHORELINE SETBACK IMPACT (1,096 SF)
- SHORELINE OHWM
- 50-FT STANDARD SHORELINE SETBACK
- 25-FT REDUCED SHORELINE SETBACK
- TREE TO BE REMOVED

IMPACTS PLAN

SCALE: 1/16" = 1'

0 8' 16' 32' 64'

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SHORELINE IMPACT INSET PLAN
SCALE: 1" = 10'

LEGEND

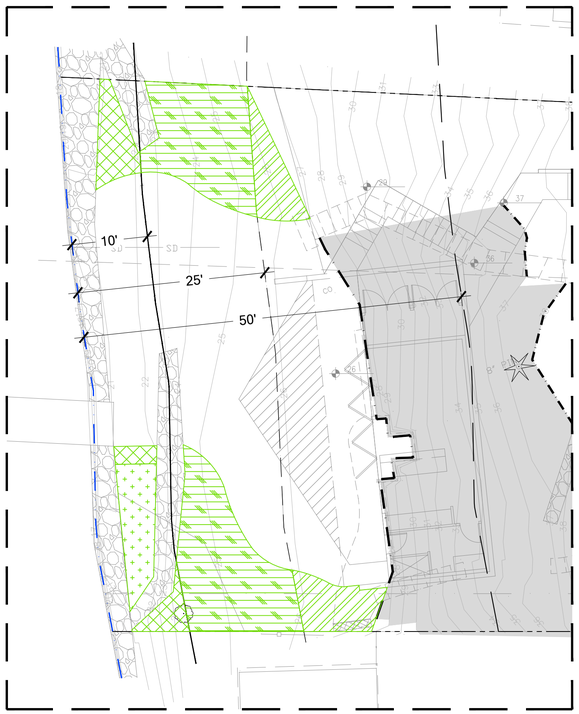
0 TO 25 FEET FROM SHORELINE
LAWN (42 SF)

25 TO 50 FEET FROM SHORELINE
IMPERVIOUS SURFACE (237 SF)

LAWN OR INVASIVE SPECIES (318 SF)

NATIVE VEGETATION (688 SF)

SHORELINE OHWM
50-FT SHORELINE STRUCTURE SETBACK
25-FT SETBACK



SHORELINE MITIGATION INSET PLAN
SCALE: 1" = 10'

LEGEND

NATIVE OVERHANGING VEGETATION
0-10 FEET FROM OHWM (75 SF)
(PURSUANT TO 20.225E.065.F.8.c.iv)

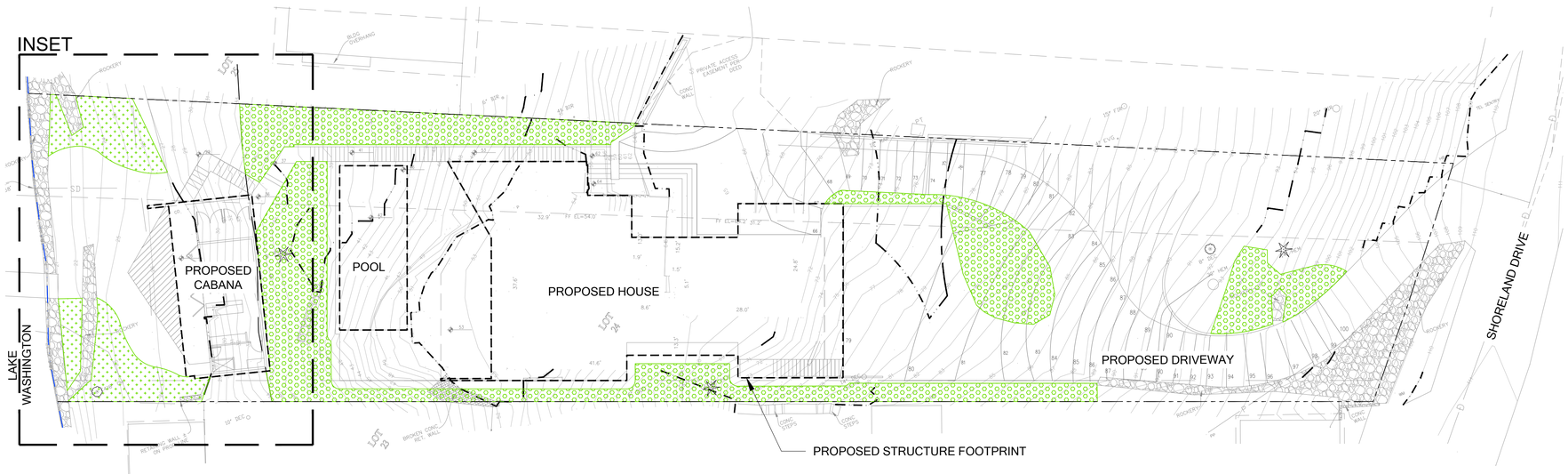
NATIVE OVERHANGING VEGETATION
0-10 FEET FROM OHWM (91 SF)

NATIVE VEGETATION 10-25 FEET FROM
OHWM (428 SF)

NATIVE VEGETATION 25-50 FEET FROM
OHWM (128 SF)

SHORELINE OHWM
50-FT SHORELINE STRUCTURE SETBACK
25-FT SETBACK
10-FT FROM OHWM

INSET



LEGEND

PARCEL BOUNDARY
TOP OF SLOPE
TOE OF SLOPE
TOP OF SLOPE BUFFER
TOE OF SLOPE SETBACK

SHORELINE SETBACK MITIGATION (722 SF)

STEEP SLOPE BUFFER SETBACK
MITIGATION (3,257 SF)

SHORELINE OHWM
OHWM 50-FT BUFFER
OHWM 25-FT BUFFER

SHORELINE IMPACTS & MITIGATION PLAN

SCALE: 1/16" = 1'

0 8' 16' 32' 64'

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PLANT SCHEDULE (SHORELINE BUFFER)

		SIZE	SPACING	QTY
	TREES			
	THUJA PLUCATA / WESTERN RED CEDAR	2 GAL	AS SHOWN ON PLANS	4
	SALIX SCOULERIANA / SCOULER'S WILLOW	2 GAL		4
	SHRUBS			
	LONICERA INVOLUCRATA / TWINBERRY	1 GAL	6' O.C.	13
	CORNUS SERICEA / REDTWIG DOGWOOD	1 GAL	4' O.C.	13
	RIBES SANGUINEUM / RED-FLOWERING CURRENT	1 GAL	4' O.C.	13
	MAHONIA AQUIFOLIUM / TALL OREGON GRAPE	1 GAL	4' O.C.	13
	GROUNDCOVER			
	POLYSTICHUM MUNITUM / SWORD FERN	1 GAL	24" O.C.	48
	FRAGARIA CHILOENSIS / BEACH STRAWBERRY	1 GAL	24" O.C	48
	GUALTHERIA SHALLON / SALAL	1 GAL	24" O.C	48

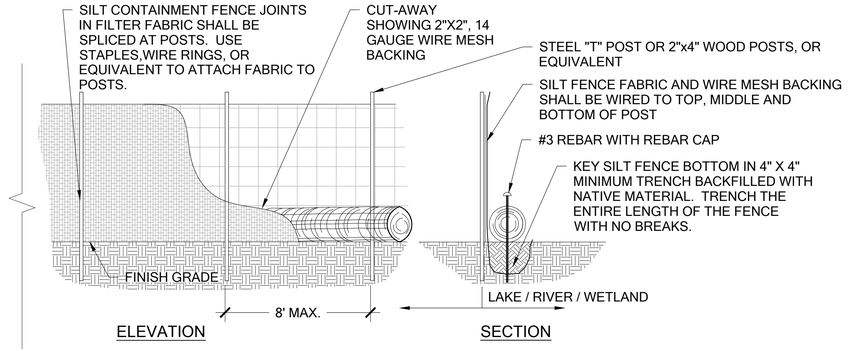
PLANT SCHEDULE (STEEP SLOPE & BUFFER)

		SIZE	SPACING	QTY
	TREES			
	PSEUDOTSUGA MENZIESII / DOUGLAS-FIR	2 GAL	AS SHOWN ON PLANS	3
	THUJA PLUCATA / WESTERN RED CEDAR	2 GAL		4
	TSUGA MERTENSIANA / MOUNTAIN HEMLOCK	2 GAL		4
	ACER CIRCINATUM / VINE MAPLE	2 GAL		5
	SHRUBS			
	OEMLERIA CERASIFORMIS / OSOBERRY	1 GAL	6' O.C.	44
	SYMPHORICARPUS ALBUS / SNOWBERRY	1 GAL	4' O.C.	44
	RIBES SANGUINEUM / RED-FLOWERING CURRENT	1 GAL	4' O.C.	44
	MAHONIA AQUIFOLIUM / TALL OREGON GRAPE	1 GAL	4' O.C.	44
	GROUNDCOVER			
	POLYSTICHUM MUNITUM / SWORD FERN	1 GAL	24" O.C.	170
	FRAGARIA CHILOENSIS / BEACH STRAWBERRY	1 GAL	24" O.C.	170
	GUALTHERIA SHALLON / SALAL	1 GAL	24" O.C.	170

NOTES

1. PIT AMEND WHERE EXISTING NATIVE SPECIES ARE PRESENT ON STEEP SLOPES AND IN BUFFER AREAS (W5, D).
2. IN SHORELINE BUFFER PLANTING AREA AMEND EXISTING SOILS (W5, E)

SILT FENCE MAINTENANCE STANDARDS:
1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION EXCEEDS 6" IN DEPTH.



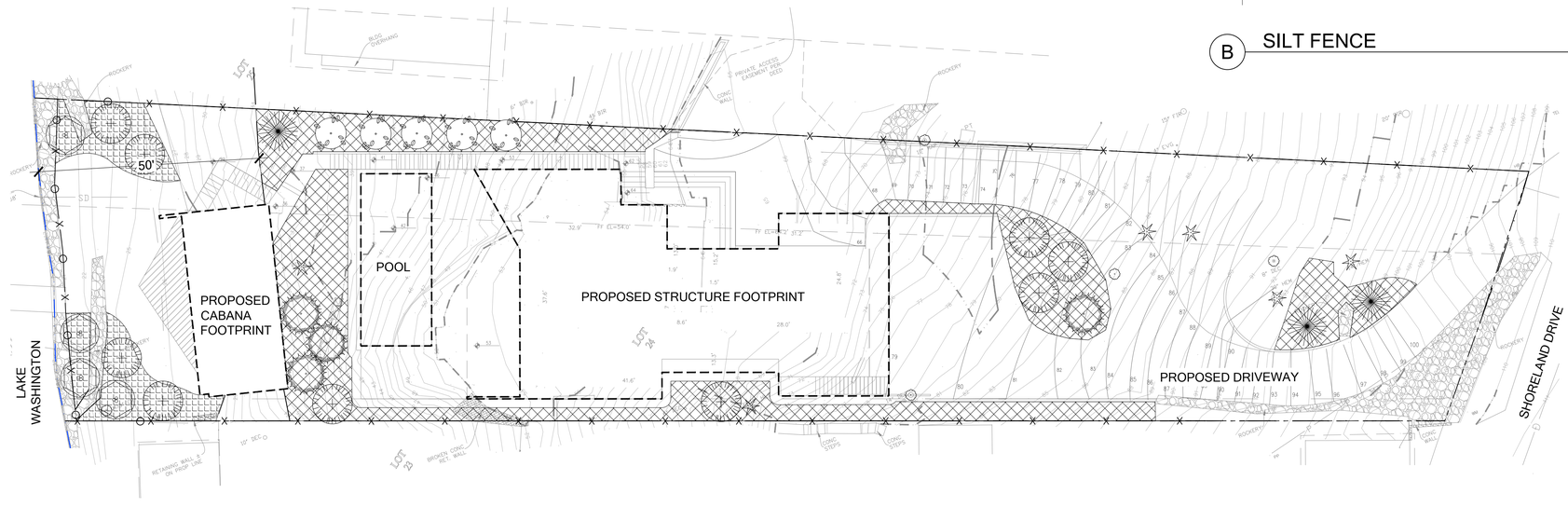
A SILT FENCE & BIODEGRADABLE WATTLE

Scale: NTS

SILT FENCE MAINTENANCE STANDARDS:
1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION EXCEEDS 6" IN DEPTH.

B SILT FENCE

Scale: NTS



LEGEND

- PARCEL BOUNDARY
- TOP OF SLOPE
- TOE OF SLOPE
- TOP OF SLOPE BUFFER
- TOE OF SLOPE SETBACK
- SHORELINE OHWM
- OHWM 50-FT BUFFER
- OHWM 25-FT BUFFER
- SILT FENCE (580-LF) (W4, B)
- SILT FENCE & BIODEGRADABLE WATTLE (235-LF) (W4, A)

PLANTING PLAN

SCALE: 1/16" = 1'

0 8' 16' 32' 64'

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W4 OF 6

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PLANT INSTALLATION SPECIFICATIONS

GENERAL NOTES

QUALITY ASSURANCE
1. PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
2. PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
3. TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
4. NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 1973 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

DEFINITIONS
1. PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC..; SPRIGS, PLUGS, AND LINERS.
2. CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
2. SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
3. IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
4. SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION
1. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
2. PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
3. THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENT OF PLANTS
1. PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
2. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
3. WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.).

SUBMITTALS

PROPOSED PLANT SOURCES
1. WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES
1. PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
2. HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION
CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS
1. TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
2. SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
3. HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
4. LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY
PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

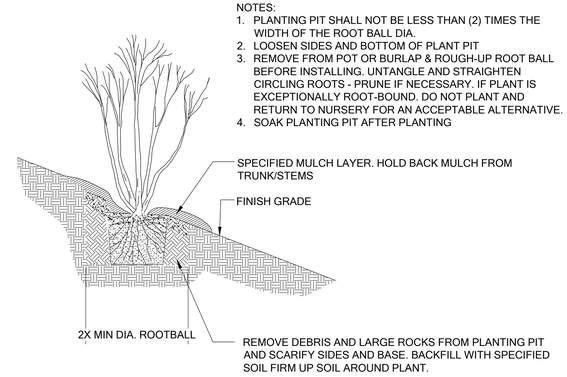
REPLACEMENT
1. PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE CONSULTANT'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
2. PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLANT MATERIAL

GENERAL
1. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

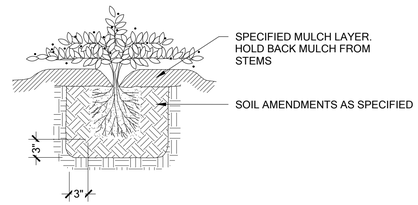
QUANTITIES
SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

ROOT TREATMENT
1. CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
2. PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
3. ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.



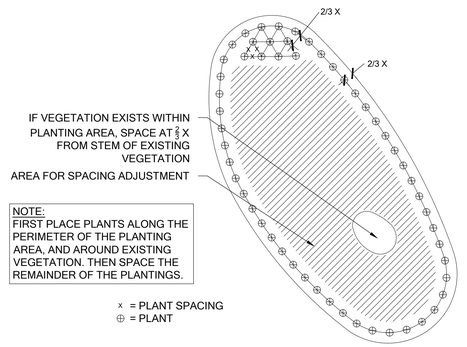
A TREE AND SHRUB PLANTING

Scale: NTS



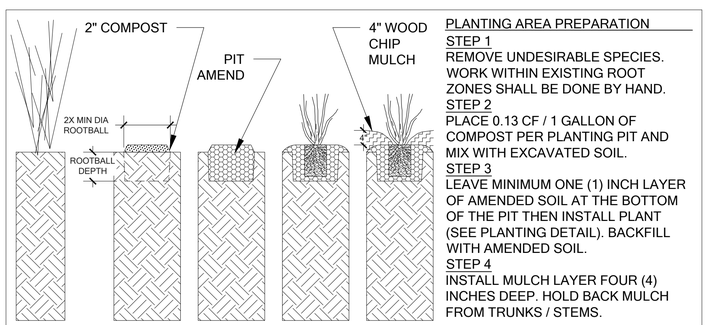
B GROUNDCOVER PLANTING

Scale: NTS



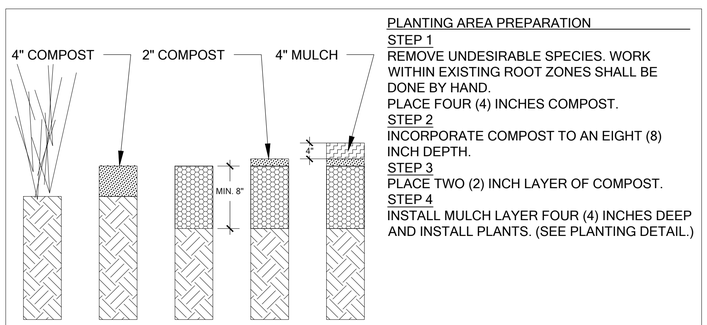
C PLANT SPACING

Scale: NTS



D SOIL PREP 1: PIT AMEND (INFILL PLANTING)

Scale: NTS



E SOIL PREP 2: AMEND EXISTING SOILS

Scale: NTS

PLANT INSTALLATION SPECIFICATIONS & DETAILS

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MITIGATION & MONITORING NOTES

MITIGATION & MONITORING NOTES THE PROPOSED MITIGATION PLAN SEEKS TO ENHANCE PORTIONS OF THE ON-SITE SHORELINE BUFFER AS WELL AS UPLAND AREAS OF STEEP SLOPE AND STEEP SLOPE BUFFER AND SETBACK. AN AREA 722 SQUARE FEET IN SIZE IN THE SHORELINE (WITHIN 50-FT OF THE OHWM) AND 3,257 SQUARE FEET IN SIZE ON UPLAND STEEP SLOPES AND STEEP SLOPE BUFFERS/SETBACKS WILL BE RESTORED BY REMOVING INVASIVE VEGETATION AND PLANTING A VARIETY OF NATIVE TREES, SHRUBS, AND GROUNDCOVER IN SUITABLE LOCATIONS. SPECIES INCLUDE DOUGLAS-FIR, WESTERN REDCEDAR, CASCARA, SCOULER'S WILLOW, OSOBERRY, TWINBERRY, RED-FLOWERING CURRANT, SNOWBERRY, TALL OREGON GRAPE, SWORD FERN, BEACH STRAWBERRY, AND SALAL.

MAINTENANCE AND MONITORING PLAN

THE SITE SHALL BE MAINTAINED AND MONITORED FOR FIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION. COMPONENTS OF THE 5-YEAR MAINTENANCE AND MONITORING PLAN ARE DETAILED BELOW.

GOALS
1. ESTABLISH DENSE NATIVE VEGETATION THAT IS APPROPRIATE TO THE ECO-REGION AND SITE.
2. LIMIT INVASIVE AND/OR NOXIOUS WEED COVER ON-SITE.
3. INCREASE OVERHANGING NATIVE VEGETATION ON LAKE WASHINGTON.
4. INCREASE HABITAT COVER AND REFUGE FOR URBAN WILDLIFE SPECIES. PROVIDE PERCHING, NESTING AND FORAGING HABITAT FOR NATIVE BIRDS.

PERFORMANCE STANDARDS
THE STANDARDS LISTED BELOW WILL BE USED TO JUDGE THE SUCCESS OF THE INSTALLATION OVER TIME. IF PERFORMANCE STANDARDS ARE MET AT THE END OF YEAR 5, THE SITE WILL THEN BE DEEMED SUCCESSFUL AND THE PERFORMANCE SECURITY BOND WILL BE ELIGIBLE FOR RELEASE BY THE CITY OF BELLEVUE.

1. SURVIVAL: ACHIEVE 100% SURVIVAL OF INSTALLED PLANTS BY THE END OF YEAR 1. THIS STANDARD CAN BE MET THROUGH PLANT ESTABLISHMENT OR THROUGH REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
2. NATIVE PLANT COVER:
   A. ACHIEVE 40% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 2. RETAINED VEGETATION AND NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
   B. ACHIEVE 60% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 3. RETAINED VEGETATION AND NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
   C. ACHIEVE 80% UNDERSTORY COVER OF NATIVE SAPLING TREES, SHRUBS AND GROUNDCOVER BY YEAR 5. RETAINED VEGETATION AND NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS COVER STANDARD.
3. SPECIES DIVERSITY: ESTABLISH AT LEAST THREE NATIVE TREE AND FOUR NATIVE SHRUB SPECIES BY YEAR 3 AND MAINTAIN THIS DIVERSITY THROUGH YEAR 5. NATIVE VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.
4. INVASIVE COVER: AERIAL COVER FOR ALL NON-NATIVE, INVASIVE AND NOXIOUS WEEDS WILL NOT EXCEED 10% AT ANY YEAR DURING THE MONITORING PERIOD. INVASIVE PLANTS INCLUDE BUT ARE NOT LIMITED TO HIMALAYAN BLACKBERRY (RUBUS ARMENIACUS), CUT LEAF BLACKBERRY (RUBUS LACINIATUS, KNOTWEEDS (POLYGONUM CUSPIDATUM AND OTHERS), REED CANARYGRASS (PHALARIS ARUNDINACEA), CHERRY (HEDGE) LAUREL (PRUNUS LAUROCERASUS), ENGLISH HOLLY (ILEX AQUIFOLIUM), AND IVY SPECIES (HEDERA SPP.).

MONITORING METHODS
THIS MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE MITIGATION SITE OVER TIME AND TO MEASURE THE DEGREE TO WHICH THE SITE IS MEETING THE PERFORMANCE STANDARDS OUTLINED IN THE PRECEDING SECTION.

AN AS-BUILT PLAN WILL BE PREPARED BY THE RESTORATION PROFESSIONAL PRIOR TO THE BEGINNING OF THE MONITORING PERIOD. THE AS-BUILT PLAN WILL BE A MARK-UP OF THE PLANTING PLANS INCLUDED IN THIS PLAN SET. THE AS-BUILT PLAN WILL DOCUMENT ANY DEPARTURES IN PLANT PLACEMENT OR OTHER COMPONENTS FROM THE PROPOSED PLAN.

MONITORING WILL TAKE PLACE ONCE ANNUALLY IN THE FALL FOR FIVE YEARS. YEAR-1 MONITORING WILL COMMENCE IN THE FIRST FALL SUBSEQUENT TO INSTALLATION. THE FORMAL MONITORING VISIT SHALL RECORD AND REPORT THE FOLLOWING IN AN ANNUAL REPORT SUBMITTED TO THE CITY OF BELLEVUE:

1. VISUAL ASSESSMENT OF THE OVERALL SITE.
2. YEAR-1 COUNTS OF LIVE AND DEAD PLANTS BY SPECIES. YEAR-2 THROUGH YEAR-5 COUNTS OF ESTABLISHED NATIVE TREES AND SHRUBS BY SPECIES, TO THE EXTENT FEASIBLE.
3. COUNTS OF DEAD PLANTS WHERE MORTALITY IS SIGNIFICANT IN ANY MONITORING YEAR.
4. ESTIMATE OF NATIVE COVER IN THE MITIGATION AREA.
5. ESTIMATE OF NON-NATIVE, INVASIVE WEED COVER IN THE MITIGATION AREA.
6. TABULATION OF ESTABLISHED NATIVE SPECIES, INCLUDING BOTH PLANTED AND VOLUNTEER SPECIES.
7. PHOTOGRAPHIC DOCUMENTATION FROM AT LEAST THREE FIXED REFERENCE POINTS.
8. ANY INTRUSIONS INTO OR CLEARING OF THE PLANTING AREAS, VANDALISM, OR OTHER ACTIONS THAT IMPAIR THE INTENDED FUNCTIONS OF THE MITIGATION AREA.
9. RECOMMENDATIONS FOR MAINTENANCE OR REPAIR OF ANY PORTION OF THE MITIGATION AREA.

MAINTENANCE
THE SITE WILL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS FOR AT LEAST FIVE YEARS FOLLOWING COMPLETION OF CONSTRUCTION:

1. FOLLOW THE RECOMMENDATIONS NOTED IN THE PREVIOUS MONITORING SITE VISIT.
2. GENERAL WEEDING FOR ALL PLANTED AREAS:
   A. AT LEAST TWICE YEARLY, REMOVE ALL COMPETING WEEDS AND WEED ROOTS FROM BENEATH EACH INSTALLED PLANT AND ANY DESIRABLE VOLUNTEER VEGETATION TO A DISTANCE OF 18 INCHES FROM THE MAIN PLANT STEM. WEEDING SHOULD OCCUR AT LEAST TWICE DURING THE SPRING AND SUMMER. FREQUENT WEEDING WILL RESULT IN LOWER MORTALITY, LOWER PLANT REPLACEMENT COSTS, AND INCREASED LIKELIHOOD THAT THE PLAN MEETS PERFORMANCE STANDARDS BY YEAR 5.
   B. MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLAN INSTALLATION.
   C. DO NOT WEED THE AREA NEAR THE PLANT BASES WITH STRING TRIMMER (WEED WHACKER/WEED EATER). NATIVE PLANTS ARE EASILY DAMAGED OR KILLED, AND WEEDS EASILY RECOVER AFTER TRIMMING.
   D. SELECTIVE APPLICATIONS OF HERBICIDE MAY BE NEEDED TO CONTROL INVASIVE WEEDS, ESPECIALLY WHEN INTERMIXED WITH NATIVE SPECIES. HERBICIDE APPLICATION, WHEN NECESSARY, SHALL BE CONDUCTED ONLY BY A STATE-LICENSED APPLICATOR.
3. APPLY SLOW-RELEASE, GRANULAR FERTILIZER TO EACH INSTALLED PLANT ANNUALLY IN THE SPRING (BY JUNE 1) OF YEARS 2 THROUGH 5.
4. REPLACE MULCH AS NECESSARY TO MAINTAIN A 4-INCH-THICK LAYER, RETAIN SOIL MOISTURE, AND LIMIT WEEDS.
5. REPLACE EACH PLANT FOUND DEAD IN THE SUMMER MONITORING VISITS DURING THE UPCOMING DORMANT SEASON (OCTOBER 15 TO MARCH 1), FOR BEST SURVIVAL.
6. THE PROPERTY OWNER WILL ENSURE THAT WATER IS PROVIDED FOR THE ENTIRE PLANTED AREA WITH A MINIMUM OF 1 INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION, THROUGH HAND-WATERING OR THE OPERATION OF A TEMPORARY IRRIGATION SYSTEM. LESS WATER IS NEEDED DURING MARCH, APRIL, MAY AND OCTOBER.

GENERAL WORK SEQUENCE

SITE PREPARATION
1. INSTALL SILT FENCE AND BIODEGRADABLE WATTLE PER PLANS.
2. MANUALLY CLEAR INVASIVE AND ORNAMENTAL VEGETATION FROM MITIGATION AREA DURING SPRING AND/OR SUMMER MONTHS (I.E., AVOID CREATING EXPOSED SOIL CONDITIONS DURING THE WINTER STORM SEASON).
   A. REMOVE INVASIVE SPECIES (I.E., HIMALAYAN BLACKBERRY, ENGLISH IVY), IN ACCORDANCE WITH KING COUNTY NOXIOUS WEED BEST MANAGEMENT PRACTICES. FOR MORE INFORMATION: HTTPS://WWW.KINGCOUNTY.GOV/SERVICES/ENVIRONMENT/ANIMALS-AND-PLANTS/NOXIOUS-WEEDS.ASPX.
   B. WITHIN APPROXIMATELY FIVE FEET OF PROPERTY BOUNDARIES, CUT UNDESIRABLE VEGETATION. LEAVE ROOTS INTACT TO MINIMIZE POTENTIAL IMPACTS TO SLOPES ON ADJACENT PROPERTIES.
   C. FLUSH-CUT ORNAMENTAL WOODY VEGETATION (E.G. ENGLISH HOLLY) THROUGHOUT MITIGATION AREA AND IMMEDIATELY TREAT STEM (DAUBING OR PAINTING) WITH APPROPRIATE HERBICIDE. PERSON APPLYING HERBICIDE SHALL BE STATE-LICENSED. DO NOT REMOVE SUBSURFACE ROOTS.
   D. AVOID AND MINIMIZE DISTURBANCE AND/OR COMPACTION TO ROOTS OF ESTABLISHED NATIVE TREES TO BE RETAINED WHEN REMOVING VEGETATION FROM WITHIN TREE DRIPLINES.
3. BLANKET-MULCH CLEARED AREAS OR RING MULCH AROUND INSTALLED AND EXISTING NATIVE PLANTS WITH WOOD MULCH, FOUR INCHES THICK.
   A. ENSURE MULCH DOES NOT TOUCH STEMS OF EXISTING (OR INSTALLED) VEGETATION. SEE PLANTING DETAIL ON SHEET W5.

MITIGATION PLANTING AND IRRIGATION
1. INSTALL MITIGATION PLANTS DURING THE DORMANT SEASON (OCTOBER 15 - MARCH 1).
   A. PREPARE A PLANTING PIT FOR EACH PLANT THROUGH BLANKET WOOD MULCH AND INSTALL PER THE PLANTING DETAILS.
2. INSTALL A TEMPORARY, ABOVE GROUND IRRIGATION SYSTEM TO PROVIDE FULL COVERAGE TO ALL INSTALLED PLANTS WITHIN THE RESTORATION AREA.

MATERIAL SPECIFICATIONS AND DEFINITIONS

1. FERTILIZER (FOR NEAR AQUATIC ENVIRONMENTS): SLOW-RELEASE, PHOSPHOROUS-FREE GRANULAR FERTILIZER. LABEL MUST INDICATE THAT PRODUCT IS SAFE FOR AQUATIC ENVIRONMENTS. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR USE. KEEP FERTILIZER IN WEATHER-TIGHT CONTAINER WHILE ON-SITE. FERTILIZER IS ONLY TO BE APPLIED IN YEARS TWO AND THREE, NOT IN YEAR ONE.
2. IRRIGATION SYSTEM: AUTOMATED SYSTEM CAPABLE OF DELIVERING AT LEAST ONE INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION.
3. RESTORATION PROFESSIONAL: WATERSHED COMPANY [(425) 822-5242] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS.
4. WOODCHIP MULCH: "ARBORIST CHIPS" (CHIPPED WOODY MATERIAL) APPROXIMATELY ONE TO THREE INCHES IN MAXIMUM DIMENSION (NOT SAWDUST). THIS MATERIAL IS COMMONLY AVAILABLE IN LARGE QUANTITIES FROM ARBORISTS OR TREE-PRUNING COMPANIES. MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/DEMOLITION DEBRIS.
5. COMPOST: COMPOST SHALL MEET WSDOT STANDARDS SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, 9-14.4(8) FOR FINE COMPOST.

CONTINGENCIES
IF THERE IS A SIGNIFICANT PROBLEM WITH THE RESTORATION AREAS MEETING PERFORMANCE STANDARDS, A CONTINGENCY PLAN WILL BE DEVELOPED AND IMPLEMENTED. CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO: SOIL AMENDMENT, ADDITIONAL PLANT INSTALLATION, AND PLANT SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION.

Know what's **below.** **Call** before you dig.

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Kirkland WA 98033
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Science & Design

MITIGATION PLAN
SADIS PROPERTY DEVELOPMENT
PREPARED FOR: DAVID SADIS
PARCEL # 7768700120
9312 SE SHORELAND DR
BELLEVUE, WA 98004

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
	12-03-18	MITIGATION PLAN	LM

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: KJB
DESIGNED: LM
DRAFTED: LM
CHECKED: KJB
JOB NUMBER: 180701
SHEET NUMBER: W6 OF 6

FILENAME
PRINTED BY
DATE

MITIGATION & MONITORING NOTES